February 1975 Number 366-Part I

Solar-Geophysical Data prompt reports

Data for January 1975–December 1974

Descriptive Text Issued as Number 366 (Supplement) February 1975

NEW DATA
SOLAR WIND FROM INTERPLANETARY
SCINTILLATIONS PAGE 17

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Solar - Geophysical Data

NO. 366 FEBRUARY 1975

Part I (Prompt Reports)

DATA FOR
JANUARY 1975
DECEMBER 1974

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO

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SOLAR - GEOPHYSICAL DATA

No. 366

Issued in two parts

Hope I. Leighton, Editor

J. Virginia Lincoln, Director
Solar - Terrestrial Data Services Division

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JANUARY 1975 DATA

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ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

JANUARY 1975

PRESTO MESSAGES (THE RAPID REPORT OF MAJOR EVENTS).

Boulder 07/0039Z Magstorm begins 06/1958Z

Boulder 08/1445Z Magstorm begins with sc at 07/2355Z

Boulder 14/1515Z Magstorm begins 14/1200Z Weak Magstorm in progress 14/1500Z Expected to continue for next 48 hours

SUMMARY OF THE GEOALERT WWA MESSAGES

Message serial number	Date of issue	Date of observation	Wolf number	10cm solar flux	A index	Active Regions				Outstanding events	Forecasts			Alert Situations
						Location Lat-Long	No. of Flares Total	M	X		Date	Location Lat-Long	Desc*	
001	01	31	33	78	15	S08E43 N09W50	0 0	0 0	0 0		01	S08E43 N09W50	Q Q	SOLQUIET MAGQUIET STRATWARM ALERT /WEDNESDAY/ SIGNIFICANT WARMING EXISTS OVER EASTERN SIBERIA IN MID-STRATOSPHERE TO CENTRAL SIBERIAN ARCTIC IN UPPER STRATOSPHERE MOVING TOWARD NORTHWEST
002	02	01	28	81	05	S08E30 N09W65	0 1	0 0	0 0		02	S08E30 N09W65	Q Q	SOLQUIET MAGQUIET STRATWARM ALERT /THURSDAY/ STRATWARM EXISTS SIBERIAN ARCTIC
003	03	02	44	78	02	S08E16 N08W80 N06E63	0 0 0	0 0 0	0 0 0		03	S08E16 N08W80 N06E63	Q Q Q	SOLQUIET MAGQUIET STRATWARM ALERT /FRIDAY/ STRATWARM EXISTS EASTERN SIBERIA TO SIBERIAN ARCTIC
004	04	03	25	80	06	S07E00 N08W94 N06E49	0 1 0	0 0 0	0 0 0		04	S07E00 N08W94 N06E49	Q Q Q	SOLQUIET MAGALERT MINOR RECURRENCE 04/10 STRATWARM ALERT /SATURDAY/ STRATWARM EXISTS SIBERIAN ARCTIC EXPANDING TOWARDS NORTHEAST
005	05	04	23	77	16	S08W12 N05E36	0 0	0 0	0 0		05	S08W12 N05E36	Q Q	SOLQUIET MAGALERT MINOR 05/10 STRATWARM ALERT /SUNDAY/ STRATWARM EXISTS EAST SIBERIAN ARCTIC
006	06	05	25	76	18	S08W25 N05E23	1 0	0 0	0 0		06	S08W25 N05E23	Q Q	SOLQUIET MAGALERT MINOR 06/10 STRATWARM ALERT /MONDAY/ STRATWARM EXISTS SIBERIAN ALASKAN ARCTIC DECREASING
007	07	06	37	76	14	S10W38 N05E08 N10W37	2 2 1	0 0 0	0 0 0	GEOMAGNETIC FIELD HAS S.C. 06/1958Z	07	S10W38 N05E08 N10W37	Q Q Q	SOLQUIET MAGALERT 07/10 STRATWARM ALERT /TUESDAY/ STRATWARM EXISTS OVER CANADIAN ARCTIC IN MID-STRATOSPHERE SLOPING WESTWARD TO EUROPEAN ARCTIC IN UPPER STRATOSPHERE
008	08	07	32	78	30	N04W04 N09W49 S10W52 N14E12	0 0 0 0	0 0 0 0	0 0 0 0	S.C. 07/2322Z	08	N04W04 N09W49 S10W52 N14E12	Q Q Q Q	SOLQUIET MAGALERT 08/10 STRATWARM ALERT /WEDNESDAY/ STRATWARM EXISTS POLAR BASIN, PARTIAL CIRCULATION REVERSAL UPPER STRATOSPHERE
009	09	08	34	80	25	N05W16 N11W63 N15E78 S10W65 N14W01 S20W90	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0		09	N05W16 N11W63 N15E78 S10W65 N14W01 S20W90	Q Q Q Q Q Q	SOLQUIET MAGALERT 09/10 STRATWARM ALERT /THURSDAY/ STRATWARM EXISTS POLAR BASIN. CANADIAN MID-STRATOSPHERE SLOPING NORTHWEST TO SIBERIAN ARCTIC UPPER STRATOSPHERE
010	10	09	54	83	08	N05W29 N10W79 N13E65 S25E32 S10W78 N14W14	2 0 1 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0			N05W29 N10W79 N13E65 S25E32 S10W78 N14W14	Q Q Q Q Q Q	SOLQUIET MAGNIL STRATWARM ALERT /FRIDAY/ STRATWARM POLAR REGION MIDDLE STRATOSPHERE WITH SECOND CELL EAST SIBERIA. WARMING UPPER STRATOSPHERE EUROPEAN ARCTIC DECREASING IN INTENSITY
011	11	10	37	83	06	N05W43 N15E50 S25E19	0 0 0	0 0 0	0 0 0		11	N05W43 N15E50 S25E19	Q Q Q	SOLQUIET MAGQUIET STRATWARM ALERT /SATURDAY/ STRATWARM EXISTS EAST SIBERIAN ARCTIC. TEMPERATURE REVERSAL PERSISTS MIDDLE STRATOSPHERE
012	12	11	40	84	03	N06W58 N13E39 N03E55	0 0 0	0 0 0	0 0 0		12	N06W58 N13E39 N03E55	Q Q Q	SOLQUIET MAGQUIET STRATWARM ALERT /SUNDAY/ STRATWARM EXISTS NEAR POLE. ENERGY PULSE THROUGH LOWER STRATOSPHERE BOUNDARY AT MINIMUM
013	13	12	34	85	04	N05W71 N14E23 N05E42	0 1 1	0 0 0	0 0 0		13	N05W71 N14E23 N05E42	Q Q Q	SOLQUIET MAGQUIET STRATWARM ALERT /MONDAY/ STRATWARM EXISTS ARCTIC REGION
014	14	12	33	83	24	N05W83 N15E10 N05E27	0 1 0	0 0 0	0 0 0	A MINOR MAGNETIC DISTURBANCE STARTED ABOUT 13/0130Z	14	N05W83 N15E10 N05E27	Q Q Q	SOLQUIET MAGALERT 14/16 STRATWARM ALERT /TUESDAY/ STRATWARM ENDS. STRATOSPHERIC POLAR TEMPERATURE DECREASING VORTEX RETURNING POLEWARD
015	15	14	11	80	24	N15W02	0	0	0		15	N15W02	Q	SOLQUIET MAGALERT 15/16
016	16	15	41	80	11	N14W16 N02W05	0 0	0 0	0 0		16	N14W16 N02W02	Q Q	SOLQUIET MAGALERT 16/18
017	17	16	23	79	16	N14W29 N01W18	0 0	0 0	0 0		17	N14W29 N01W18	Q Q	SOLQUIET MAGALERT 17/18

* Q=Quiet E=Eruptive A=Active P=Proton C=Caution D=Doubtful O.G.=Other Groups

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

JANUARY 1975

SUMMARY OF THE GEOALERT WWA MESSAGES

Message serial number	Date of issue	Date of observation	Wolf number	10cm solar flux	A index	Active Regions: Location Lat-Long	Active Regions: No. of Flares: Total	Active Regions: No. of Flares: M	Active Regions: No. of Flares: X	Outstanding events	Forecasts: Date	Forecasts: Location Lat-Long	Forecasts: Desc*	Alert Situations
018	18	17	13	77	25	N14W42	0	0	0	MINOR MAGNETIC DISTURBANCE CONTINUES	18	N14W42	Q	SOLQUIET MAGALERT 18
019	19	18	34	78	19	N14W53 N06E15	0 0	0 0	0 0	MINOR MAGNETIC DISTURBANCE DECREASING	19	N14W53 N06E15	Q Q	SOLQUIET MAGALERT MINOR 19/20
020	20	19	28	77	11	N14W67 N07E02	0 0	0 0	0 0		20	N14W67 N07E02	Q Q	SOLQUIET MAGALERT MINOR 20
021	21	20	24	76	09	N14W82 N07W12	0 0	0 0	0 0		21	N14W82 N07W12	Q Q	SOLQUIET MAGNIL
022	22	21	29	77	06	N07W27 N05E09	0 0	0 0	0 0		22	N07W27 N05E09	Q Q	SOLQUIET MAGQUIET
023	23	22	38	76	05	N07W41 N05W04 N08E13	0 0 0	0 0 0	0 0 0		23	N07W41 N05W04 N08E13	Q Q Q	SOLQUIET MAGQUIET
024	24	23	00	75	05	-	-	-	-		24	SPOTNIL		SOLQUIET MAGQUIET
025	25	24	00	73	10	-	-	-	-		25	SPOTNIL		SOLQUIET MAGQUIET
026	26	25	11	73	05	N04E09	0	0	0		26	N04E09	Q	SOLQUIET MAGQUIET
027	27	26	00	73	04	-	-	-	-		27	SPOTNIL		SOLQUIET MAGQUIET
028	28	27	00	72	11	-	-	-	-		28	SPOTNIL		SOLQUIET MAGQUIET
029	29	28	00	73	09	-	-	-	-		29	SPOTNIL		SOLQUIET MAGQUIET
030	30	29	00	73	07	-	-	-	-		30	SPOTNIL		SOLQUIET MAGQUIET
031	31	30	00	73	07	-	-	-	-		31	SPOTNIL		SOLQUIET MAGALERT MINOR 31/04
001	01	31	00	72	17	-	-	-	-		31	SPOTNIL		SOLQUIET MAGALERT MINOR 01/04

RELATIVE SUNSPOT NUMBERS

ZURICH, R_z

DAY	1974 PROVISIONAL FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1975 JAN
1	13	25	26	48	38	82	37	8	61	16	0	30
2	12	16	20	70	49	97	23	9	53	17	0	30
3	8	16	19	89	55	96	12	16	46	39	9	29
4	7	17	22	103	80	98	17	41	60	44	16	19
5	0	18	21	106	62	107	18	40	85	34	17	18
6	0	19	23	113	78	111	26	50	83	22	8	23
7	8	20	28	109	70	88	32	44	81	26	7	32
8	16	16	38	106	59	63	34	32	91	14	0	29
9	22	20	58	91	64	42	45	63	102	7	0	37
10	21	30	70	69	61	29	51	80	114	24	9	31
11	21	37	75	64	58	22	50	83	110	24	21	30
12	36	38	78	56	38	27	67	88	92	21	31	31
13	50	30	83	40	48	28	69	82	76	15	35	32
14	26	42	87	35	46	46	66	67	63	7	33	11
15	46	37	98	24	34	65	59	67	48	16	33	20
16	48	23	93	16	25	74	57	70	41	20	41	17
17	47	20	75	8	24	65	52	73	28	20	36	16
18	46	32	64	0	29	59	44	65	14	15	30	20
19	45	20	51	0	32	45	43	58	7	34	40	20
20	43	9	49	0	23	51	32	34	11	37	40	18
21	37	16	43	0	20	55	29	13	12	37	46	16
22	45	31	28	7	11	61	34	0	9	39	37	16
23	35	27	17	9	11	64	34	7	7	46	28	15
24	29	21	19	7	16	62	28	11	7	33	26	7
25	17	18	20	0	15	61	25	11	8	28	9	7
26	20	10	20	20	8	67	8	13	16	27	8	7
27	42	9	38	18	8	60	8	19	30	27	8	0
28	35	17	30	32	18	61	8	23	27	10	21	7
29		19	22	20	30	42	14	38	22	7	16	7
30		25	16	8	52	41	8	60	22	7	17	7
31		26		52		38	15		16		10	0
MEAN	27.7	22.7	44.4	42.3	38.7	61.5	33.7	42.2	46.5	23.9	20.4	18.7

1973 yearly mean = 38.0

DAILY SOLAR FLUX AT 2800 MHz
OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S_a

DAY	1974 FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1975 JAN
1	71.8	75.4	72.1	98.5	97.9	105.4*	95.1	77.8	93.1	90.2	79.7	78.1
2	73.1	75.5	71.3	113.1*	100.1	112.7*	95.2	79.4	94.6	92.0	78.7	75.8
3	73.1	77.1	71.6	115.5	98.9	118.5*	93.0	79.2	93.4	96.2	76.7	77.1
4	72.9	79.0	73.3	118.0	98.2	127.8*	95.8	81.0	100.5	99.5	74.7	74.4
5	74.0	79.6	76.3	119.7	96.5	125.6*	96.5	81.5	113.3*	97.6*	73.2	73.7
6	75.4	77.5	80.0	123.0	95.0*	121.5	98.0	82.2	115.0	92.3	71.9	73.8
7	77.4	76.0	80.2	119.3	92.8	110.9*	95.8	85.4	114.5*	85.6	71.1	75.7
8	78.8	77.0	81.1	115.8	95.0*	104.7*	89.4	93.4	125.2	82.0	69.6	77.7
9	80.8	80.2	87.8	110.0	95.1	95.5	87.5	96.0	128.9	78.9	69.6	79.9
10	80.5	86.1	93.5*	105.1	97.0	88.2	88.3	102.0	129.3*	78.4	70.4	80.5
11	77.5	85.9	99.8	104.3	95.3*	83.1	94.4	104.6	137.5*	77.3	76.2	81.2
12	76.5	86.2	105.6*	97.1	91.7	83.3	99.4	105.6	144.1	79.1	77.9	82.4
13	77.3	84.5	102.8	93.5	89.8	83.3	95.2	106.8*	126.6	76.1	78.0	80.4
14	76.3	81.9	116.3	88.2	88.1	83.3	93.2	104.1	113.2*	77.7	78.2	77.7
15	83.7	82.9	122.9*	84.9	84.7	85.5	92.1	103.6	103.7*	80.3	83.2	77.4
16	84.7	81.8	115.0*	80.3	86.2	91.3	96.6	102.0*	94.9	82.5	84.3	76.5
17	85.9	82.7	101.8	75.8	87.2	91.0	98.8	100.3	93.8	84.6	85.3	74.7
18	87.5	80.2	98.0	75.2	84.4	86.5	95.1*	100.0	91.0	88.5	90.3	75.8
19	92.7	80.0	87.5*	73.0	82.8	87.1	88.8	91.7	75.2	96.0	91.9	74.1
20	92.2	79.6	82.3	72.5	83.8	86.7	82.6	85.9*	75.5	95.6	87.3	73.8
21	92.2	79.1	79.5	71.9	81.4	90.1	81.2*	82.7	73.9	96.2	86.0	74.5
22	92.2	80.0	75.3	72.2	82.3	95.3*	80.6	81.0	72.6	98.7	84.4*	73.6
23	94.2	79.9	73.9	71.5	80.2	98.5	81.0	74.6	74.0	98.1	83.0	72.7
24	80.9	76.6	75.0	71.6	79.1	92.1*	77.4	72.8	74.7	95.9	80.1	71.0
25	78.6	74.3	76.5	72.4	78.8	89.5	75.7	72.8	76.9	94.5	78.9	70.3
26	76.2	72.6	74.9	79.6	79.6	93.1	73.8	75.4	80.7	92.2	75.8	70.5
27	76.4	71.5	75.3	85.1	82.4	87.9	72.7	77.0	80.0	90.8	74.3	70.1
28	75.8	70.4	77.6	87.4	83.0	84.5	71.8	80.7	81.6	86.6	73.7	70.7
29		71.5	81.6	89.4	89.4*	85.2	72.4	90.7	81.6	83.8	74.1	70.4
30		72.1	91.7	91.3	93.1*	85.9	74.2	91.5	82.7	82.0	74.5	70.5
31		72.9		95.1		87.4	75.6		86.7*		76.1	70.1
MEAN	78.9	79.4	86.7	92.6	89.0	95.5	85.1	88.7	97.1	88.3	78.6	75.0

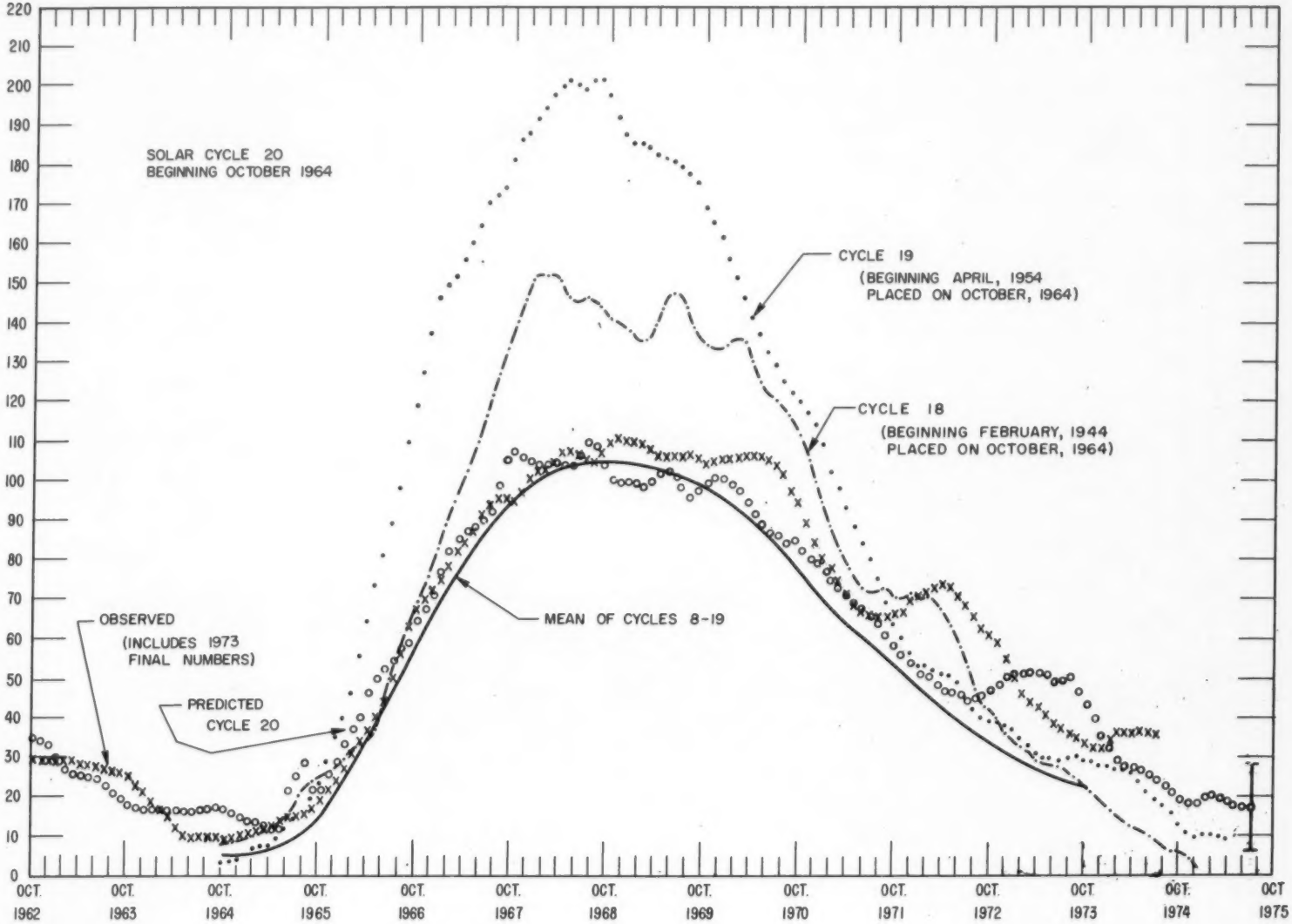
* adjusted for burst

DAILY SOLAR INDICES

JANUARY 1975

JAN 1975	YEAR DAY	BARTELS 27-DAY CYCLE NUMBER	SUNSPOT NUMBERS		OBSERVED FLUX	SOLAR FLUX ADJUSTED TO 1 A.U.								
			R_Z	$R_{A'}$	OTTAWA 2800	AFCRL 15400	AFCRL 8800	AFCRL 4995	OTTAWA 2800	AFCRL 2695	AFCRL 1415	AFCRL 606	AFCRL 410	AFCRL 245
1	1	2	30	27	80.8	523	273	119	78.1	76.9	50.3	37.7	25.1	9.1
2	2	3	30	31	78.4	528	273	120	75.8	75.2	50.7	37.0	24.2	8.3
3	3	4	28	28	79.7	524	279	120	77.1	76.4	53.7	39.2	25.8	9.5
4	4	5	19	22	76.9	521	271	119	74.4	73.3	48.9	34.8	23.3	8.2
5	5	6	18	20	76.2	508	273	117	73.7	73.7	50.7	37.6	24.0	10.6
6	6	7	23	17	76.3	515	270	116	73.8	72.1	51.7	36.4	23.0	7.8
7	7	8	32	28	78.3		270	119	75.7	75.4	51.4	38.5	22.5	8.0
8	8	9	29	30	80.3	530	270	122	77.7	76.6	51.1	37.9	21.8	8.3
9	9	10	37	39	82.6	528	272	122	79.9	77.0	54.1	38.0	22.5	8.4
10	10	11	31	33	83.2	522	275	122	80.5	78.1	54.1	38.0	22.1	8.1
11	11	12	30	20	84.0	536	271	127	81.2	80.3	55.6	38.3	22.2	8.1
12	12	13	31	21	85.2	527	270	127	82.4	81.3	53.0	39.2	23.6	9.1
13	13	14	32	18	83.1	520	269	125	80.4	78.3	55.7	39.2	24.8	12.2
14	14	15	11	11	80.4	514	267	122	77.7	78.1	57.5	38.9	30.4	13.4
15	15	16	20	20	80.0	522	265	123	77.4	76.7	55.4	39.8	26.2	9.3
16	16	17	17	21	79.0	523	263	120	76.5	75.4	53.0	38.9	23.5	8.8
17	17	18	16	13	77.2	522	267	118	74.7	74.0	51.8	39.5	23.2	8.0
18	18	19	20	19	78.3	520	268	121	75.8	74.0	54.2	39.2	23.7	8.2
19	19	20	20	23	76.6	525	266	120	74.1	73.4	50.7	35.7	23.0	8.3
20	20	21	18	25	76.2	529	265	118	73.8	72.8	49.7	37.4	24.9	8.2
21	21	22	16	17	77.0	525	264	119	74.5	73.0	52.2	39.4	24.1	8.5
22	22	23	16	17	76.0	516	262	119	73.6	74.0	49.3	36.0	22.2	9.0
23	23	24	15	5	75.0	518	264	117	72.7	72.5	47.9	36.1	23.0	8.6
24	24	25	7	2	73.3	523	262	117	71.0	70.7	45.8	35.2	22.4	9.1
25	25	26	7	5	72.5	520	266	115	70.3	69.5	45.9	34.3	23.5	8.3
26	26	27	7	1	72.8	516			70.5					
27	27	1	0	0	72.3	520	270	117	70.1	70.0	45.7	34.5	24.0	8.7
28	28	2	7	1	72.9	524	269	117	70.7	69.4	46.0	34.9	22.9	8.2
29	29	3	7	1	72.6	518	267	117	70.4	68.5	46.9	33.6	23.1	8.3
30	30	4	7	3	72.7	511	266	116	70.5	70.4	46.4	34.8	22.4	8.2
31	31	5	0	0	72.2	527	266	115	70.1	69.5	45.9	34.3	21.4	8.1
MEAN			18.7	16.7	77.5	522	268	120	75.0	74.2	50.8	37.1	23.6	8.8

* Corrected for burst.



PREDICTED AND OBSERVED SUNSPOT NUMBERS

SMOOTHED OBSERVED AND PREDICTED SUNSPOT NUMBERS
CYCLE 20

MONTH	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1964										9.6	10.2	11.3
1965	11.7	12.0	12.5	13.6	14.6	15.0	15.5	16.4	17.4	19.7	22.3	24.5
1966	27.7	31.3	34.5	37.4	40.7	44.6	50.3	56.6	63.1	67.6	70.2	72.7
1967	75.0	78.8	82.2	84.6	87.4	91.3	94.1	95.3	95.3	95.0	97.1	100.6
1968	102.6	102.9	104.7	107.2	107.6	106.6	105.2	104.8	107.0	109.9	110.6	110.1
1969	110.0	109.6	108.0	106.4	106.2	106.1	105.8	106.4	105.4	104.1	104.6	104.9
1970	105.6	106.0	106.2	106.1	105.8	105.3	103.8	101.0	97.2	93.9	89.4	84.1
1971	80.4	77.8	74.4	70.9	68.1	66.7	65.4	64.6	65.8	66.2	66.8	69.4
1972	70.8	71.2	72.4	73.4	72.9	70.5	68.2	65.5	62.2	60.6	58.7	55.1
1973	50.9	46.5	44.2	42.7	40.7	39.1	37.6	36.3	34.7	33.2	32.7	32.6
1974	34.2	36.1	35.7	35.7	36.4	36.2	35.7	33.7 (1)	31.5 (3)	29.6 (4)	27.9 (5)	26.6 (6)
1975	25.2 (6)	23.6 (6)	22.3 (7)	20.9 (7)	19.2 (8)	18.0 (10)	17.0 (11)	16.0 (--)	15.0 (--)	14.2 (--)	13.3 (--)	12.4 (--)

For each month, the upper figure is the observed or predicted Zürich smoothed sunspot number. The lower figure in parenthesis is the corresponding absolute value of the 90% prediction interval, an indication of the uncertainty above and below the predicted number. Observed numbers are those with no prediction intervals. The observed smoothed sunspot numbers are based on final Zürich numbers through 1973.

The predicted sunspot numbers are derived from a regression analysis based on cycles 8 through 19. Tests indicate that earlier cycles are from a different statistical population. From July 1968 - February 1970 a regression analysis based on cycles 1 through 19 was used because it had not then been proven that two populations exist.

SOLAR FLARES

PARTIAL LISTING

Solar Flares for which at least one observatory has assigned a numerical importance of "1" or greater.

JANUARY 1975

OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IM-POR-TANCE	OBS.		MEASUREMENTS					REMARKS
	DATE JAN	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME — UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
MITK	03	0323	0357	0340	N08	W89	1.000	13404	27.5	34	1B		C	0340	.52				DG
PALE	03	0335E	0344D	0338	N10	W88	1.000		27.5	90	SN	2	C		.41				
PALE	03	0338E	0351	0341U	N10	W88	1.000		27.6	130	SB	2	V		.41				

Note: Catania and Capri-S express Maximum Intensities in percent of the local undisturbed chromosphere instead of percent of the local continuum. Parentheses are used to indicate this difference.

"Remarks":

A = Eruptive prominence whose base is less than 90° from central meridian.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No visible spots in the neighborhood.
H = Flare accompanied by a high speed dark filament.
I = Active region very extended.
J = Distinct variations of plage intensity before or after the flare.
K = Several intensity maxima.
L = Existing filaments show signs of sudden activity.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the calcium II lines H and K.
P = Flare shows helium D_3 in emission.
Q = Flare shows the Balmer continuum in emission.
R = Marked asymmetry in Hα line suggests ejection of high velocity material.
S = Brightness follows disappearance of filament (same position).
T = Region active all day.
U = Two bright branches, parallel (||) or converging (Y).
V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important intensity increase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide Hα line.
Y = System of loop-type prominences.
Z = Major sunspot umbra covered by flare.

SOLAR FLARES

Date, time (UT) and coordinates of Subflares not included in preceding table.

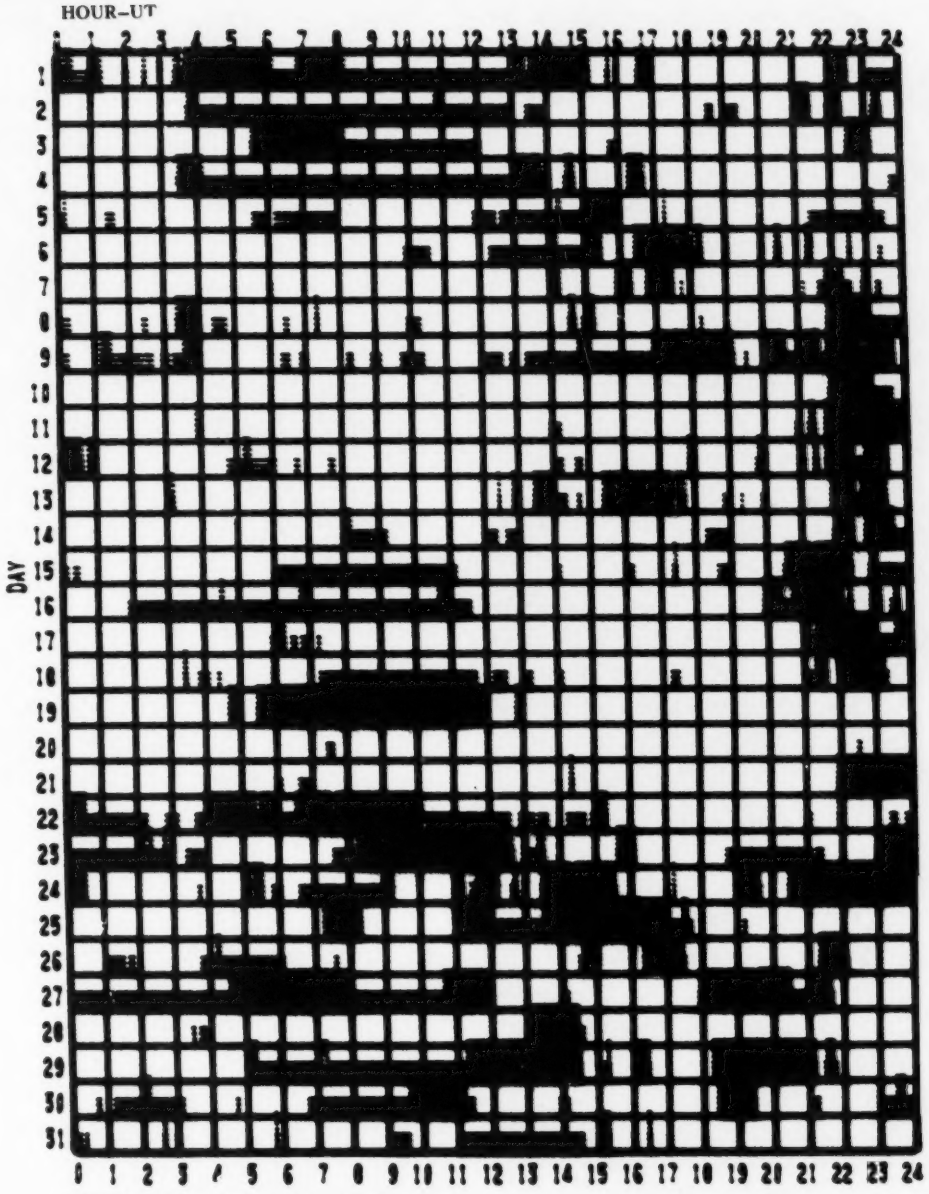
JANUARY 1975

01 0132 N05 E90
01 0139 N07 W52
05 0729E N12 E57
05 2325 S13 W24
05 2326E S07 W24
06 0030 S13 W24
06 0728 N04 E20
06 1124 S 9 W33
06 1454E N12 E41
06 1915 N 7 W25
06 1915 N10 W34
07 0310 N10 W40
09 0050 N06 W14
09 0127E N05 W17
09 0308 N06 W17
09 2023E W16 E66
10 0920 N05 W38
10 1133E N 4 W36
10 2000E N10 W90
11 2053 N18 E37
12 0706 N 7 E48
12 0707 N 3 E50
12 2053 N16 E24
12 2112E N 6 E41
12 2246E N16 E25
12 2247E N16 E25
12 2333 N17 E23
13 0038 N17 E23
13 0049 N17 E22
13 0101E N18 E23
14 2010 N 2 E15
16 0552 N02 W05
17 0155 N01 W21
17 0214 N 2 W19
21 0803 N09 E31

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

JANUARY 1975



Observatories included in total patrol:

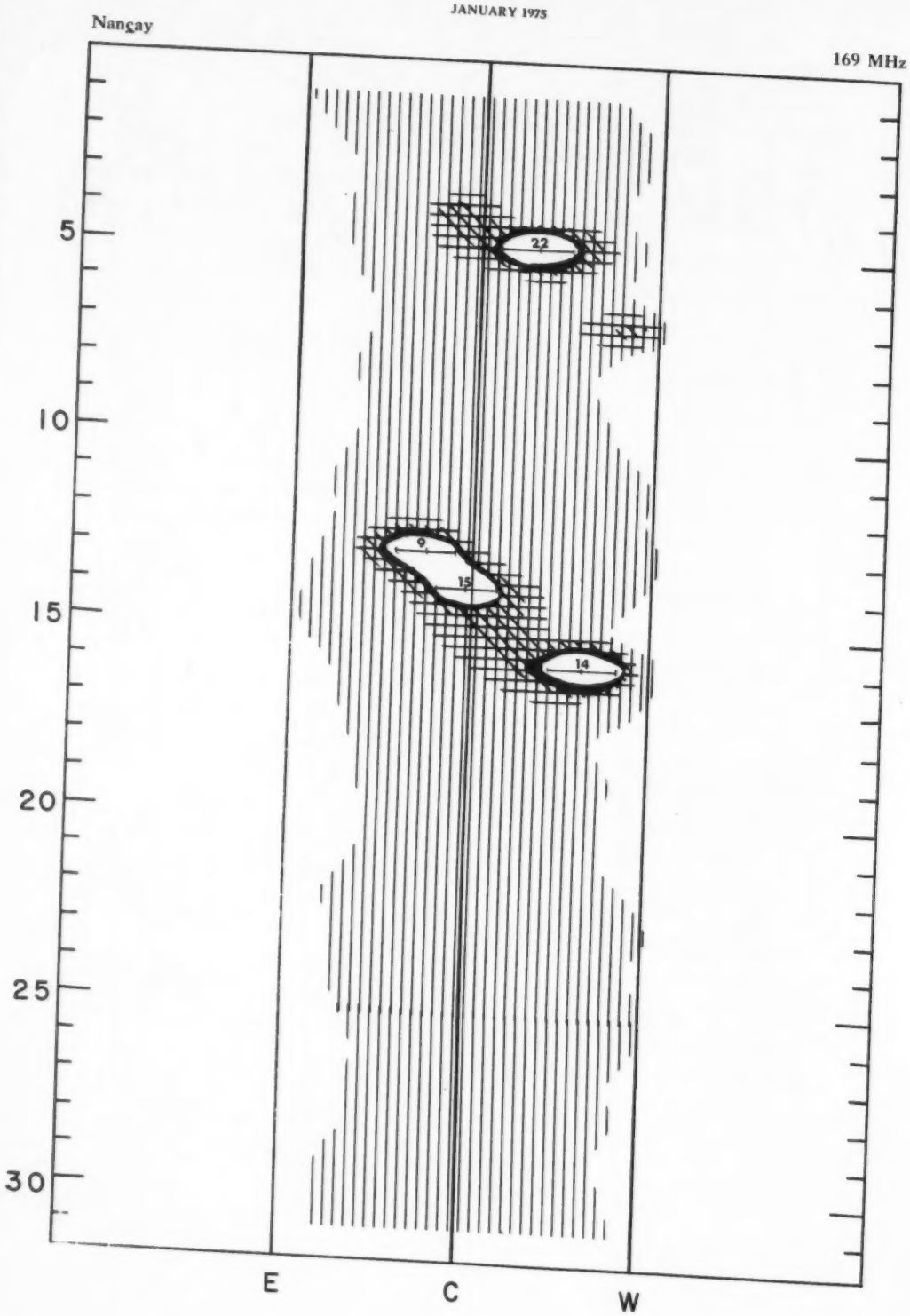
Arcetri	Bucharest	Manila	Palehua	Upice
Athenes	Herstmonceux	McMath-Hulbert	Ramey	Wendelstein
Boulder	Hurbanovo	Mitaka	Tehran	

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

12
Jan 75

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION

JANUARY 1975

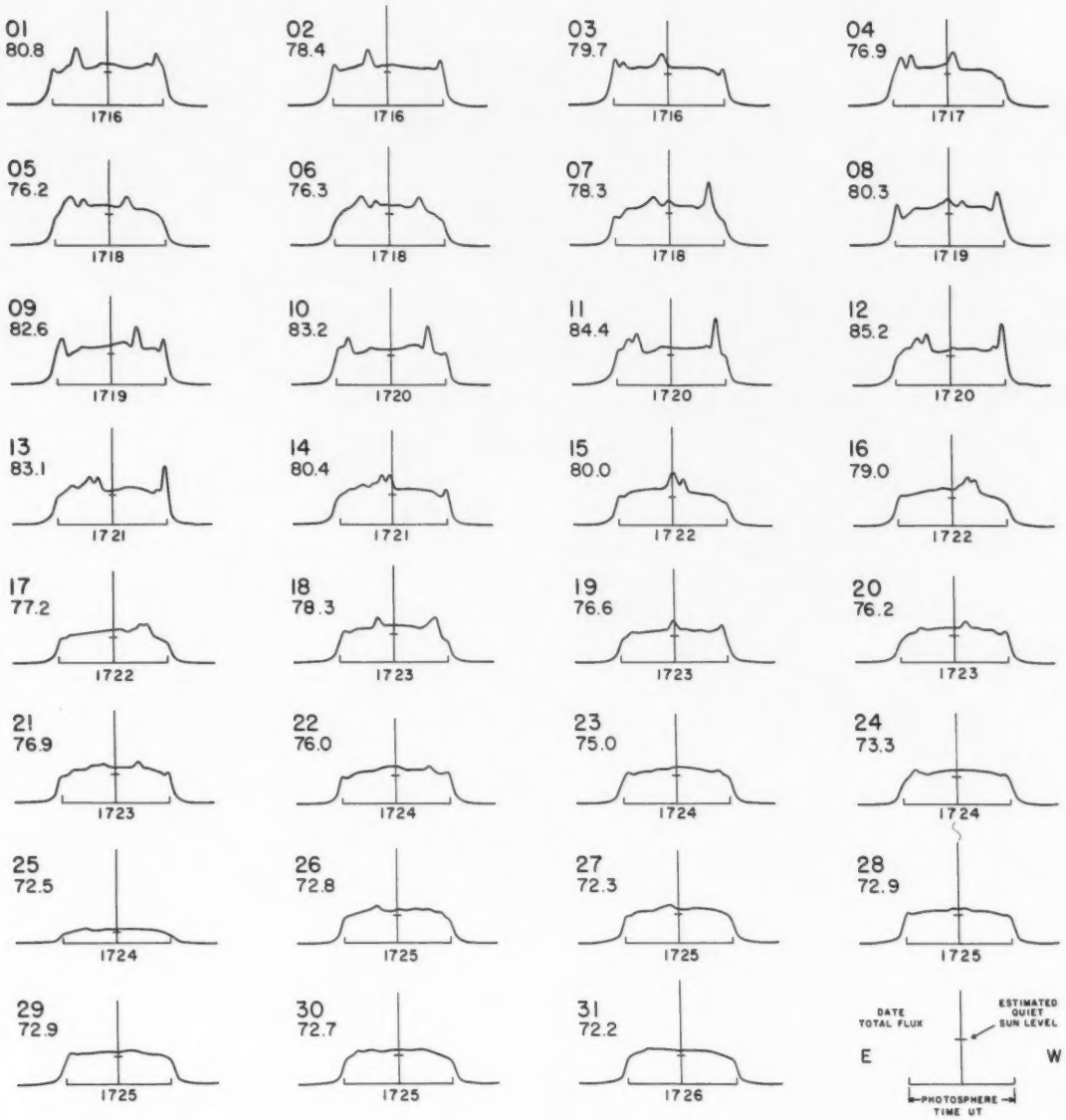


EAST - WEST SOLAR SCANS

January 1975

ALGONQUIN RADIO OBSERVATORY
CANADA

10.7 cm
Fan Beam with 1.5 minutes of arc
E - W Resolution



14
Jan 75

EAST-WEST SOLAR SCANS

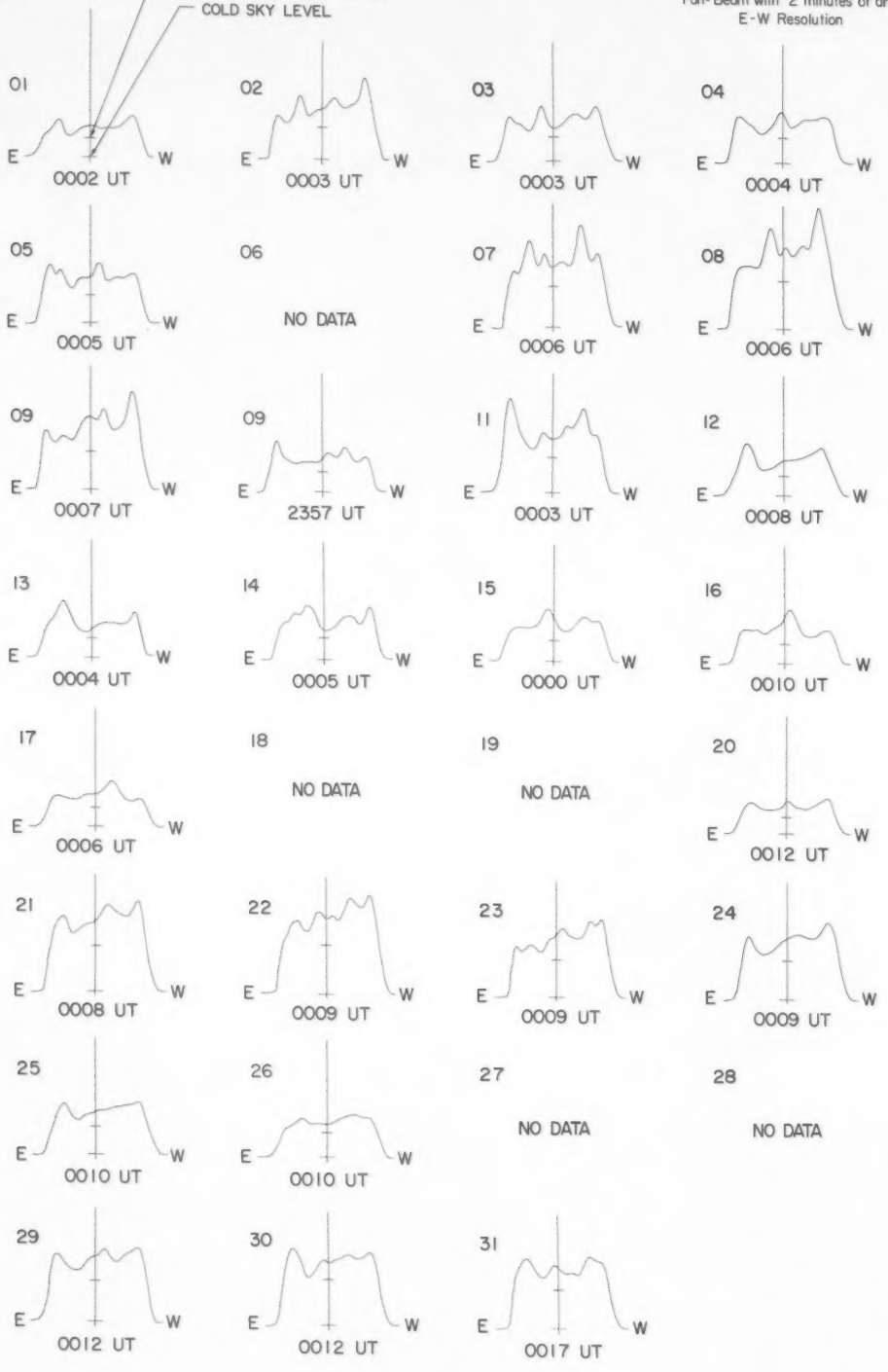
JANUARY 1975

Fleurs, Australia

ESTIMATED QUIET SUN LEVEL

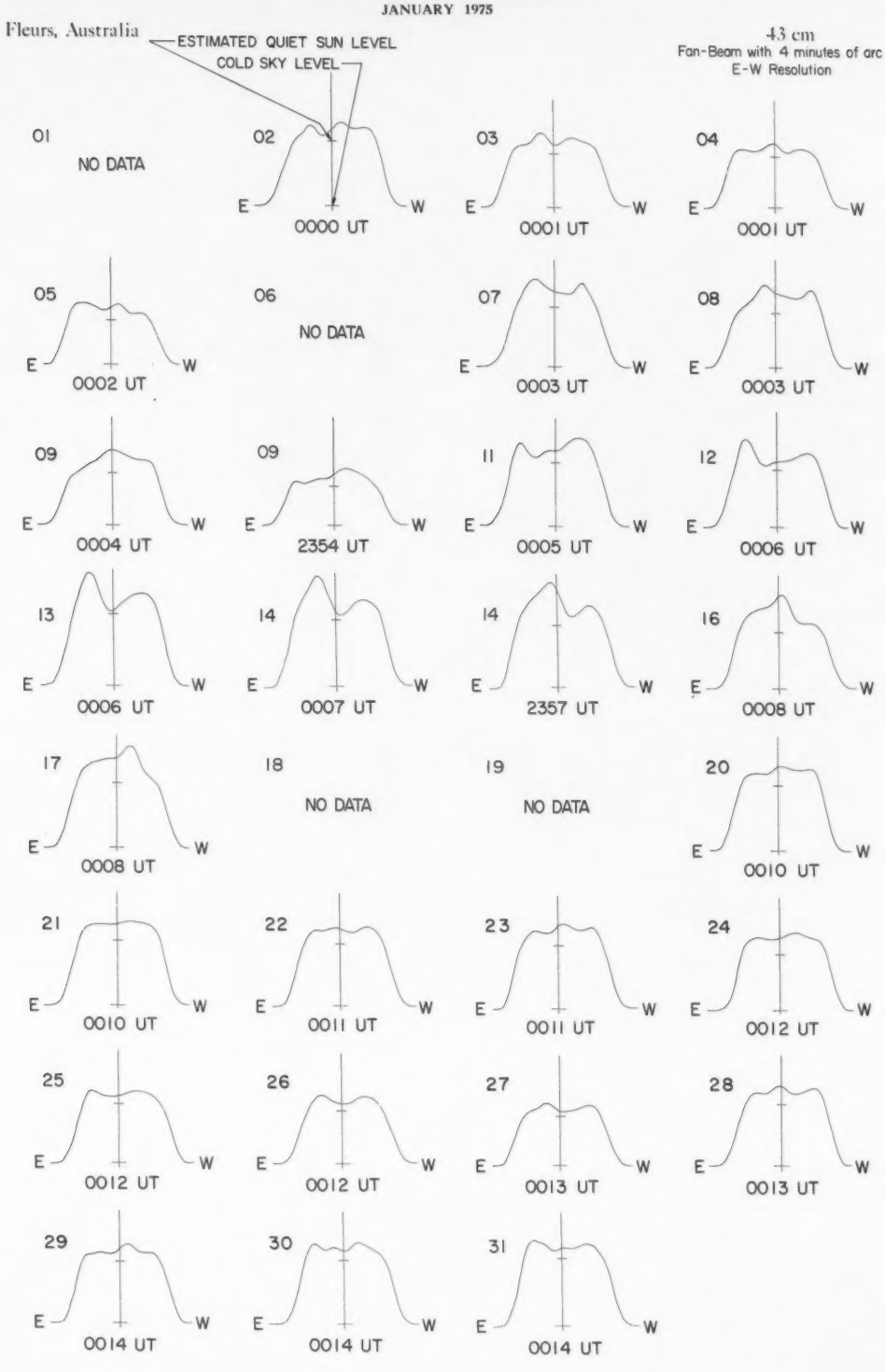
COLD SKY LEVEL

21 cm
Fan-Beam with 2 minutes of arc
E-W Resolution



EAST-WEST SOLAR SCANS

JANUARY 1975



SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

JANUARY 1975

	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
2	2800	OTTA	27 RF	1450		50	1.4	1.2		
	2800	OTTA	24 R	1450	1500	10	1.4	0.7		
	2800	OTTA	24P R	1500		35	1.4			
	2800	OTTA	26 FAL	1535	1540	5	1.4	0.7		
	2800	OTTA	240 R	1657	1722	25	1.2	0.8		
	2800	OTTA	24P R	1722		300 D	1.2			
3	2695	MANI	22	0321.8	0328.5	27.5	13.8	3.4		
	8800	MANI	2	0325	0326.6	5.9	5.2	1.7		
6	2695	MANI	22	0736.6	0739.2	14.2	10.7	1.8		
9	2800	OTTA	40 F	1844.8	1845.2	1	7.9			
	2800	OTTA	40 F	1855.5		3	10.6			
	2695	BOUL	45 C	1856.5	1857	2.5	12	4		
	2800	OTTA	8 S	1958	1958.5	0.6	12.2			
	2800	OTTA	40 F	2012	2013	2	42			
	2695	SGMR	4 S/F	2012.1	2012.9	2.1	38	11.4		
	2695	BOUL	45 C	2012.5	2014	2.5	63	13		
	2800	OTTA	8 S	2020	2020	0.1	3			
10	2695	PENT	1 S	2135	2135.7	1.5	1.4	0.7		
11	2800	OTTA	1A S	2059	2059.1	2	1.8	0.8		
	2800	OTTA	6 S	2059.1	2059.1	0.1	9.4			

Observatories:

BOUL = Boulder MANI = Manila OTTA = Ottawa ARO PENT = Penticton SGMR = Sagamore Hill

Explanation of Type Code:

1 Simple 1
2 Simple 1F
3 Simple 2
4 Simple 2F
5 Simple
6 Minor
7 Minor +
8 Spike
20 Simple 3
21 Simple 3A
22 Simple 3F
23 Simple 3AF
24 Rise
25 Rise A
26 Fall
27 Rise and Fall
28 Precursor
29 Post Burst Increase
30 Post Burst Increase A
31 Post Burst Decrease
32 Absorption
40 Fluctuation
41 Group of Bursts
42 Series of Bursts
43 Onset of Noise Storm
44 Noise Storm in Progress
45 Complex
46 Complex F
47 Great Burst
48 Major
49 Major +

SOLAR WIND
Interplanetary Scintillations
JANUARY 1975

UCSD 74 MHZ SCINTILLATIONS

DAY	3C48 *		3C144		3C147		3C161		3C237		3C273		3C298		3C459	
	VEL	ERR	VEL	ERR	VEL	ERR	VEL	ERR	VEL	ERR	VEL	ERR	VEL	ERR	VEL	ERR
2	0	0	672	58	0	0	0	0	0	0	486	94	0	0	0	0
3	305	40	298	27	0	0	0	0	0	0	0	0	0	0	470	15
4	484	43	481	132	501	152	0	0	0	0	521	118	0	0		
5	380	43	0	0	0	0	0	0	0	0	465	103	0	0	0	0
6	330	78			0	0	0	0	0	0	0	0	0	0	351	113
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	642	108
8	0	0			0	0	0	0			601	154	415	43	0	0
9	464	61	627	136	0	0	0	0	0	0	0	0	607	116	0	0
10	283	44	0	0	0	0	0	0	0	0	456	64	514	31		
11	207	50	0	0	0	0	0	0			604	222	476	66	0	0
12	440	119	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	434	50			295	41	301	111	591	63	440	81	445	25
15	0	0	265	12	0	0	0	0	0	0	756	221	605	198	0	0
16	508	122	0	0	0	0	533	106	0	0	675	108	555	123	318	59
17	0	0	0	0	0	0			0	0			0	0	0	0
19	0	0			0	0	0	0	470	167	265	71	0	0		
20	275	94	0	0	0	0	0	0	0	0	0	0	0	0	329	115
21	0	0	0	0	0	0	0	0	0	0			0	0	443	160
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	338	47
23	632	154	555	63			0	0	0	0	0	0	0	0	328	72
24			388	98	0	0	0	0	0	0	0	0	0	0	0	0
25	391	178	0	0	0	0	0	0	0	0			0	0	289	14
26	274	80	0	0			0	0	0	0	462	176	375	54	394	85
27	358	50	456	19	0	0	378	55	0	0	404	190	0	0	0	0
28	265	6	281	47	0	0	0	0	0	0	436	95	0	0	290	48
29	398	4	0	0	0	0	259	29	0	0	498	62	0	0	565	80
30	491	59	0	0	380	69	0	0	0	0	398	115	407	13	467	61
31	515	6	583	71	248	60	443	81	0	0	432	83	364	29	550	15

* Sources as given in the 3rd Cambridge Catalog.

"0" Indicates times when no velocities were obtainable.

SOLAR X–RAYS BY SATELLITE
SMS–1 GOES

JANUARY 1975

.5 - 4Å Hourly Averages (10^{-6} watts/m^2 /sec)

DA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
2	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	B	B	B	B	B
3	B	B	B	0.21	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
7	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
8	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
9	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
10	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
11	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	M	M	M	M	M	M	M	M	B
12	M	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
13	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
14	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
15	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	M	M	B	B	B	B
16	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
17	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
18	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	M	M	M	M	M	M	M	M	B
19	M	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
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23	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
24	B	B	B	B	B	M	M	M	M	M	M	M	M	M	M	M	M	B	B	B	B	B	B	B	B
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26	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
27	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
28	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
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30	B	B	B	B	M	M	M	M	M	M	M	M	M	M	M	B	B	B	B	B	B	B	B	B	B
31	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

SOLAR X–RAYS BY SATELLITE
SMS–1 GOES
JANUARY 1975

1 - 8Å Hourly Averages (10^{-5} watts/m^2 /sec)

DA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
2	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	B	B	B	B	B
3	B	B	B	C.C1	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
4	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
5	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
6	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
7	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
8	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
9	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
10	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
11	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	M	M	M	M	M	M	M	M	B
12	M	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
13	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
14	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
15	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	M	M	B	B	B
16	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
17	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
18	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	M	M	M	M	M	M	M	B
19	M	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
20	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
21	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	M	B	B	M	M	M	B	B
22	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
23	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
24	B	B	B	B	B	M	M	M	M	M	M	M	M	M	M	M	M	B	B	B	B	B	B	B	B
25	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
26	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
27	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
28	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
29	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
30	B	B	B	B	M	M	M	M	M	M	M	M	M	M	M	B	B	B	B	B	B	B	B	B	B
31	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

INFERRED IP MAGNETIC FIELD

BARTELS ROTATION	DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1896	1972 MAR 10	A	A	A	A	A	A	A	A	A	A	T	A	T	A	T	A	T	A	T	A	T	T	A	A	A	A	T
1897	APR 6	A	A	T	T	T	T	A	A	A	T	T	T	T	T	T	T	T	A	T	T	T	T	T	T	T	T	T
1898	MAY 3	A	A	A	A	A	A	T	-	A	A	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
1899	MAY 30	A	A	A	A	A	*	A	A	A	T	A	*	T	T	T	T	A	A	T	T	T	T	T	T	T	T	T
1900	JUN 26	A	A	A	A	A	A	T	A	A	T	A	A	A	A	A	A	T	A	T	T	T	T	T	T	T	T	T
1901	JUL 23	T	A	*	T	A	*	T	A	A	A	A	A	A	A	A	T	A	*	T	A	T	T	T	T	T	T	T
1902	AUG 19	A	-	A	-	A	A	A	A	A	A	A	A	A	A	A	T	A	A	A	A	A	A	A	A	A	A	A
1903	SEP 15	A	A	T	A	T	*	A	A	A	A	A	A	A	T	T	A	A	T	A	A	A	A	-	A	-	A	-
1904	OCT 12	T	T	A	-	T	A	-	A	A	*	A	T	A	T	A	T	A	A	A	T	A	A	A	T	A	T	A
1905	NOV 8	A	A	T	A	A	T	A	A	T	A	T	A	T	A	T	A	T	*	A	A	A	A	A	A	*	T	A
1906	DEC 5	T	T	T	T	T	A	A	T	-	T	-	T	T	T	T	A	A	T	A	T	T	T	T	T	T	T	T
1907	1973 JAN 1	T	T	T	T	T	T	T	T	T	A	T	T	T	A	T	A	T	-	A	T	A	T	A	A	T	A	T
1908	JAN 28	T	T	A	A	T	T	T	A	T	T	T	T	T	A	T	A	A	A	A	A	A	A	A	A	A	A	A
1909	FEB 24	A	T	T	A	T	T	A	T	A	T	T	T	-	A	T	T	A	A	A	T	T	T	T	T	T	T	T
1910	MAR 23	T	T	T	T	T	T	T	A	T	T	T	T	T	T	T	A	A	T	A	T	A	A	A	A	A	A	A
1911	APR 19	T	T	T	A	T	T	-	A	T	T	T	A	T	T	T	T	T	A	T	T	T	T	T	T	T	T	T
1912	MAY 16	T	T	T	T	T	T	T	A	T	T	-	T	-	T	A	T	T	A	A	T	A	T	T	T	T	T	T
1913	JUN 12	T	A	T	*	-	T	T	T	A	T	T	*	T	T	*	T	T	T	T	T	T	T	T	T	T	T	T
1914	JUL 9	T	T	T	T	A	A	T	T	-	T	A	T	A	T	T	*	A	T	*	A	-	A	A	T	A	T	T
1915	AUG 5	T	T	A	A	A	T	A	T	A	A	A	T	T	T	*	T	T	A	T	T	T	T	A	A	A	T	T
1916	SEP 1	T	T	A	*	T	T	T	T	A	A	T	A	A	A	A	*	T	T	T	T	T	T	T	T	T	T	T
1917	SEP 28	A	A	*	T	A	A	T	T	A	A	A	A	A	A	T	A	A	T	A	*	A	T	A	T	*	T	T
1918	OCT 25	T	T	T	T	A	T	A	A	A	T	A	T	*	T	A	T	A	A	A	A	A	A	A	A	A	A	A
1919	NOV 21	A	*	T	T	T	T	-	A	A	A	A	T	T	A	T	A	A	T	*	A	A	A	A	A	A	A	A
1920	DEC 18	T	T	A	T	A	A	T	A	T	A	T	A	T	A	A	*	A	A	*	A	T	T	T	T	T	T	T
1921	1974 JAN 14	T	A	A	T	-	T	T	A	A	T	A	A	A	A	A	A	-	A	A	-	A	T	-	T	A	T	T
1922	FEB 10	A	-	A	-	A	*	A	A	A	A	A	A	A	A	T	A	A	A	A	T	*	T	T	T	T	T	T
1923	MAR 9	A	A	A	A	A	A	A	A	A	A	A	A	A	A	T	T	T	A	T	A	A	T	A	T	A	T	A
1924	APR 5	A	A	A	A	A	-	T	A	A	A	A	A	A	A	*	A	A	A	A	A	A	A	T	T	T	T	T
1925	MAY 2	-	-	A	A	A	A	*	A	T	A	T	A	T	A	T	*	T	A	A	*	A	T	A	T	T	T	T
1926	MAY 29	T	T	A	A	A	*	-	A	A	A	A	*	A	A	*	-	T	A	*	A	A	A	A	T	T	T	T
1927	JUN 25	T	A	T	A	A	-	A	-	A	A	T	A	A	A	A	A	A	A	A	-	T	A	T	A	T	T	T
1928	JUL 22	T	T	A	A	A	A	T	A	A	A	A	A	A	A	A	A	A	A	A	-	T	-	T	-	T	-	T
1929	AUG 18	A	T	-	A	-	A	-	A	-	A	-	A	-	A	T	-	A	T	-	T	T	T	T	T	T	T	T
1930	SEP 14	A	T	T	T	A	T	A	*	A	A	A	A	A	A	A	T	A	A	T	A	A	T	T	A	T	T	T
1931	OCT 11	T	T	T	A	T	A	A	A	A	A	A	A	A	A	A	A	T	A	A	T	A	T	T	T	T	T	T
1932	NOV 7	T	A	-	T	-	A	-	A	-	A	A	A	A	A	A	A	A	-	A	-	A	T	T	T	T	T	T
1933	DEC 4	T	T	T	A	T	T	A	T	A	A	T	A	T	A	*	A	T	T	*	A	T	A	T	T	T	T	T
1934	DEC 31	-	A		T		T		T		T		-		-		T		A		-		A	*		*		A
1935	JAN 27		T		T		T		T		A	*																

T = towards the sun
A = away from the sun
* = effect doubtful or not discernable
- = missing data

The table shows daily inferences of the polarity of the interplanetary magnetic field. The first half of the day is based principally on magnetograms produced by the magnetometer at the Vostok Anarctic Station of the USSR. The magnetometer of the U.S. Air Weather Service operated by the Air Force Cambridge Research Laboratories at the Thule Geopole Station is used for the second half of the day.

Note: Computer problems are responsible for the considerable amount of missing data in August 1974.

Note: The report for the first half of the day for December 1974 has not been received.

DECEMBER 1974 DATA

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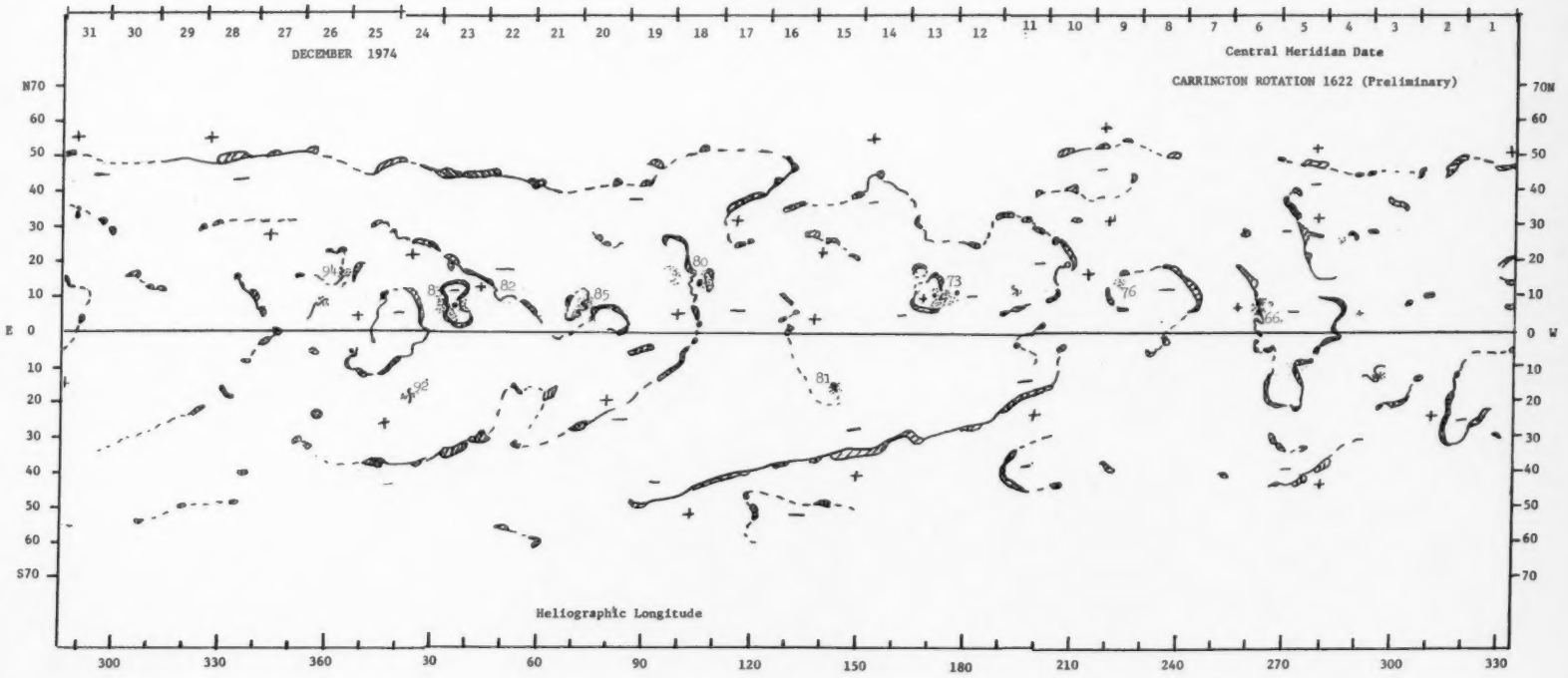
Hα SYNOPTIC CHART

DECEMBER 1974



23 Dec 74

DECEMBER 1, 1974 (P = 16.26, B_o = 0.88, L_o = 334.60)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULBERT

CALCIUM REPORT

Np

E

NOT RECEIVED AT TIME OF PUBLICATION

W

Sp

Np

E

NO DATA

W

Sp

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

KITT PEAK

Np

MAGNETOGRAM
Bright - Plus
Dark - Minus

E

NO DATA

W

Sp

MT. WILSON

Np

MAGNETOGRAM
Solid - Plus
Dotted - Minus

DELTAY=15.0
DELTAX=11.3

E

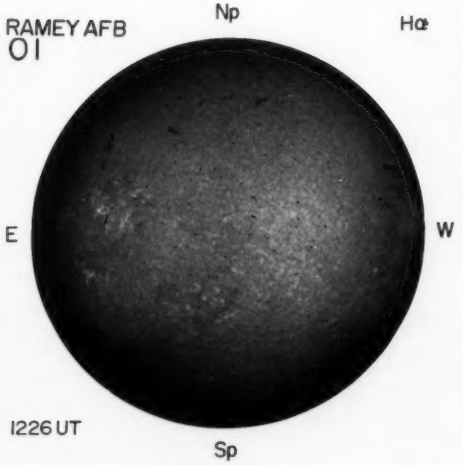
W

Levels
±5
±10
±20
±40
±80

21.37 - 22.62 UT
DATA INCOMPLETE

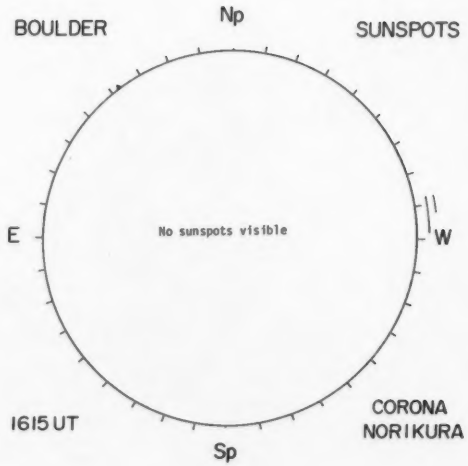
Sp

RAMEY AFB
01



1226 UT

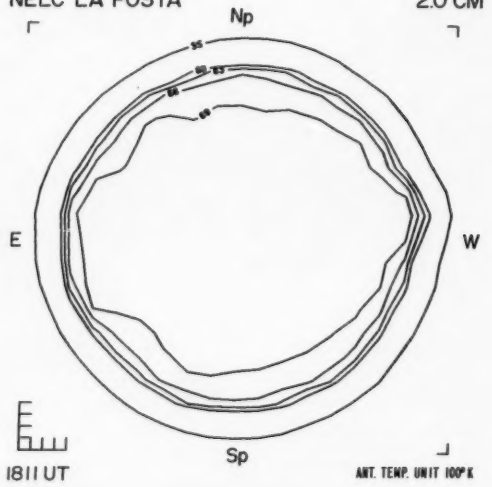
BOULDER



1615 UT

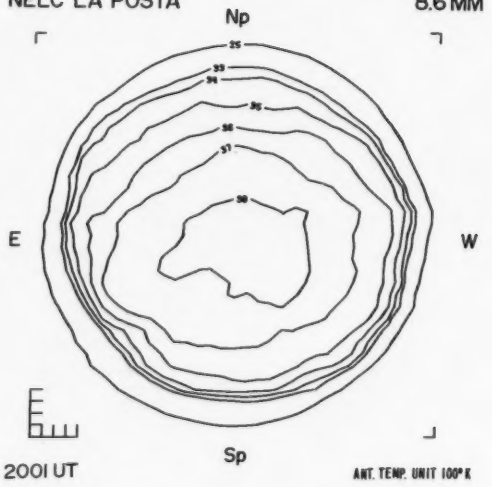
CORONA
NORIKURA

NELC LA POSTA



1811 UT

NELC LA POSTA



2001 UT

25
Dec 74

DECEMBER 2, 1974 (P = 15.88, B_o = 0.76, L_o = 321.42)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

Np

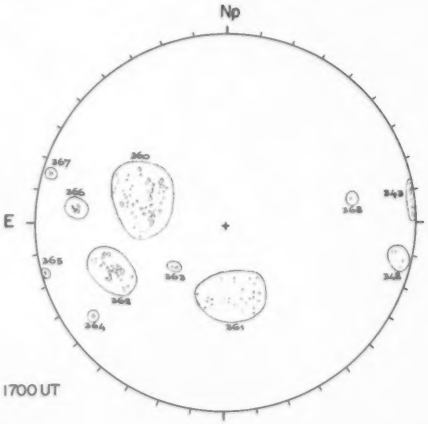
E W

Sp

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HULBERT

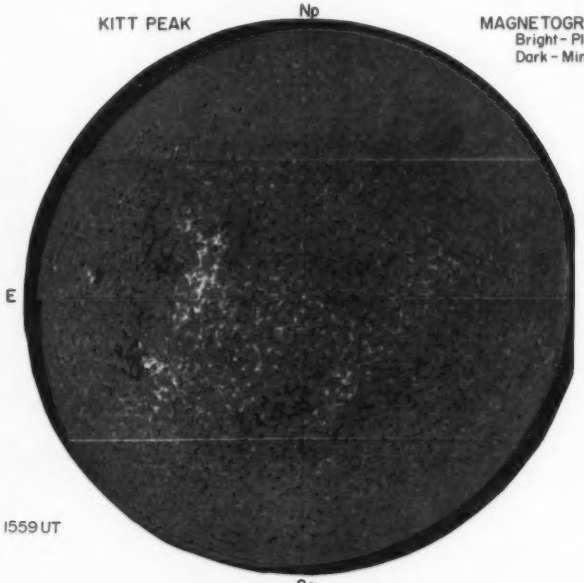
CALCIUM REPORT



FAIR | M

1700 UT

KITT PEAK

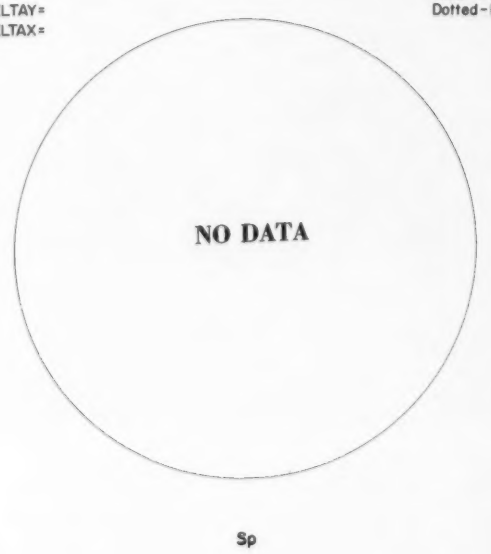


MAGNETOGRAM
Bright - Plus
Dark - Minus

1559 UT

MT. WILSON

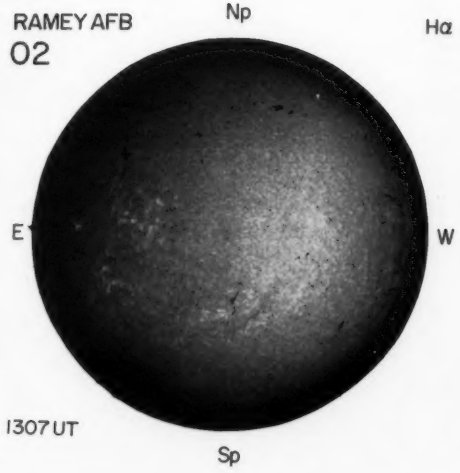
DELTAY =
DELTAX =



MAGNETOGRAM
Solid - Plus
Dotted - Minus

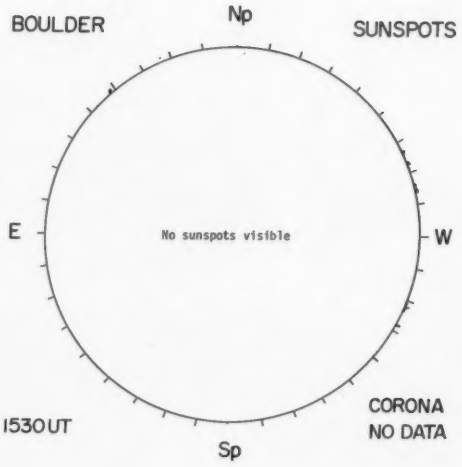
Levels
± 5
± 10
± 20
± 40
± 80

RAMEY AFB
02



1307 UT

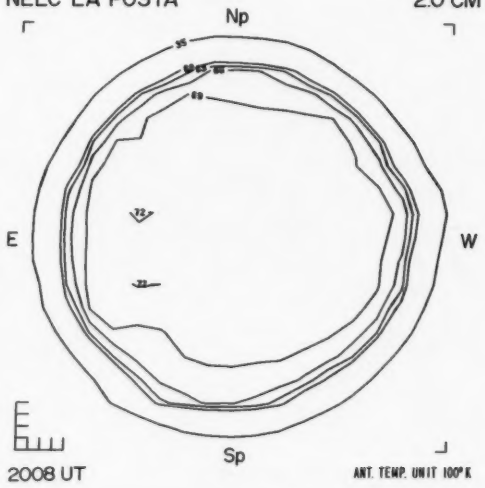
BOULDER



1530 UT

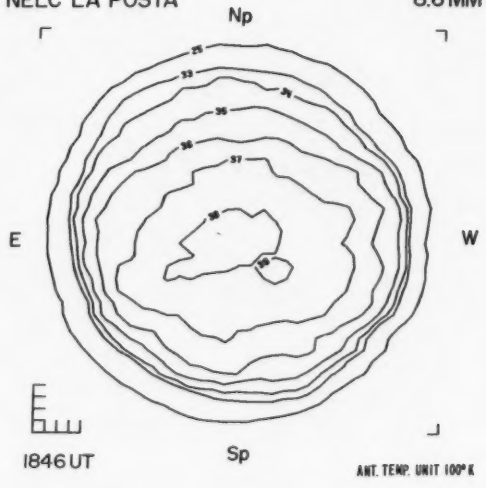
CORONA
NO DATA

NELC LA POSTA



2008 UT

NELC LA POSTA



1846 UT

27
Dec 74

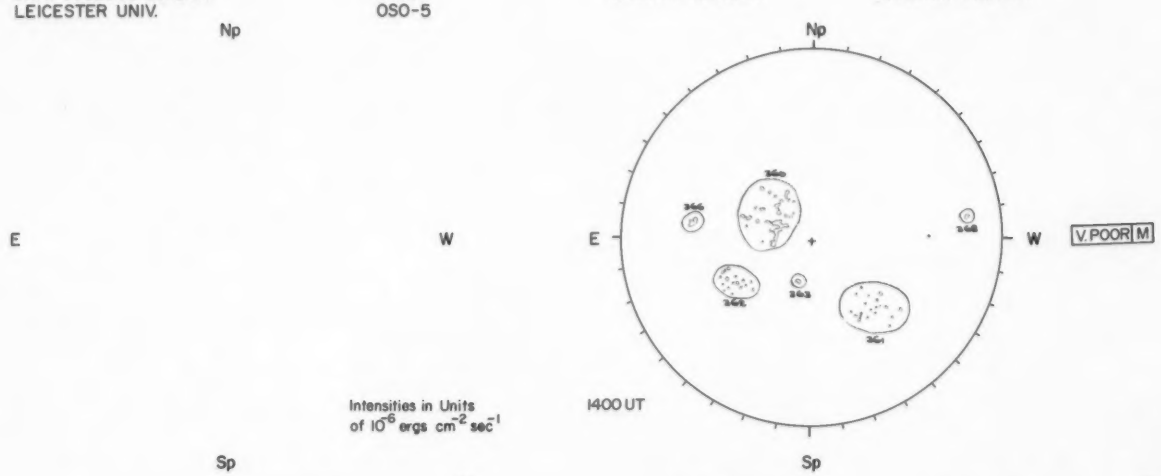
DECEMBER 3, 1974 (P = 15.49, B_o = 0.63, L_o = 308.24)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

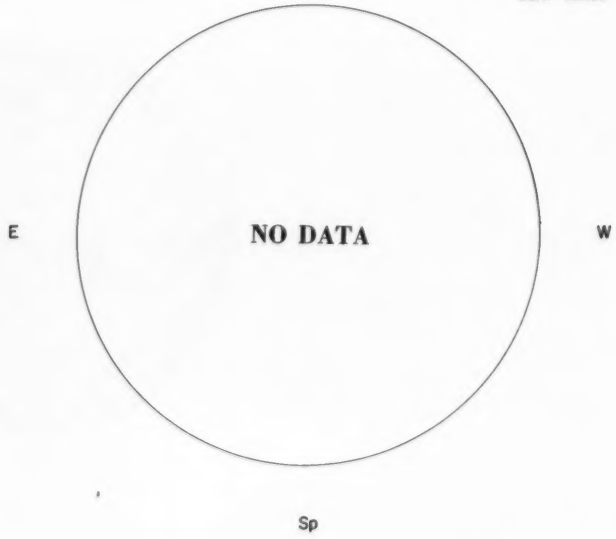
McMATH-HULBERT

CALCIUM REPORT



Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

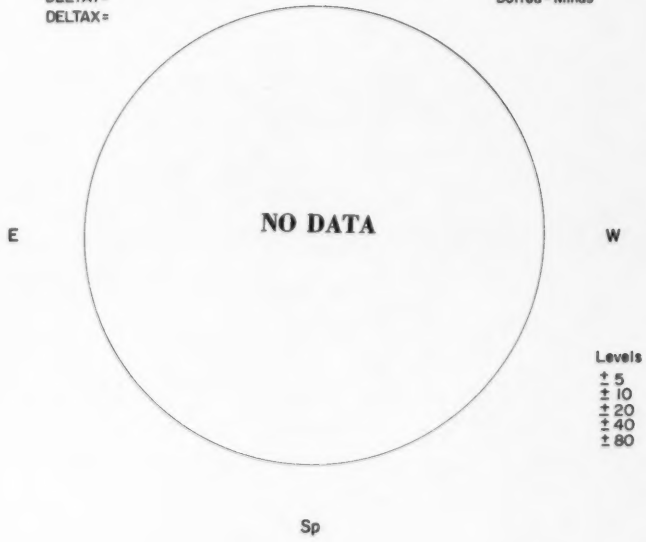
KITT PEAK



MAGNETOGRAM
Bright - Plus
Dark - Minus

MT. WILSON

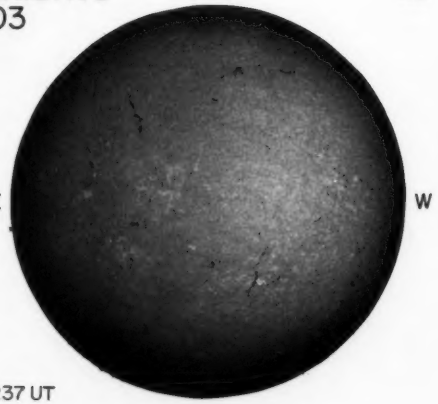
DELTAY=
DELTAX=



MAGNETOGRAM
Solid - Plus
Dotted - Minus

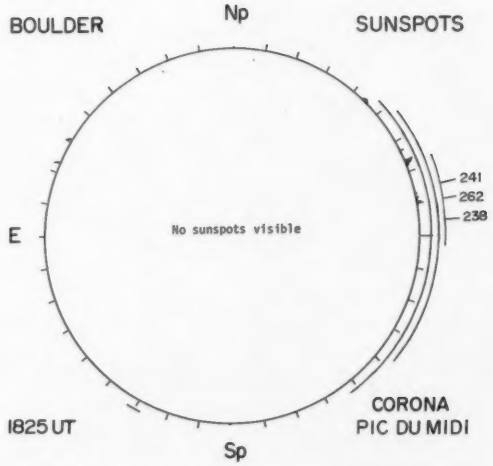
Levels
± 5
± 10
± 20
± 40
± 80

RAMEY AFB
03



1237 UT

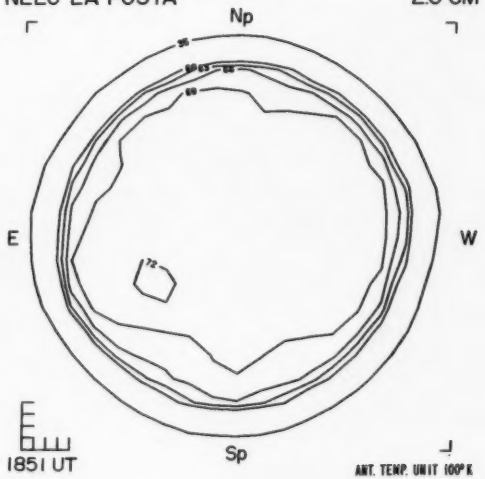
BOULDER



1825 UT

CORONA
PIC DU MIDI

NELC LA POSTA



1851 UT

NELC LA POSTA

1726 UT

29
Dec 74

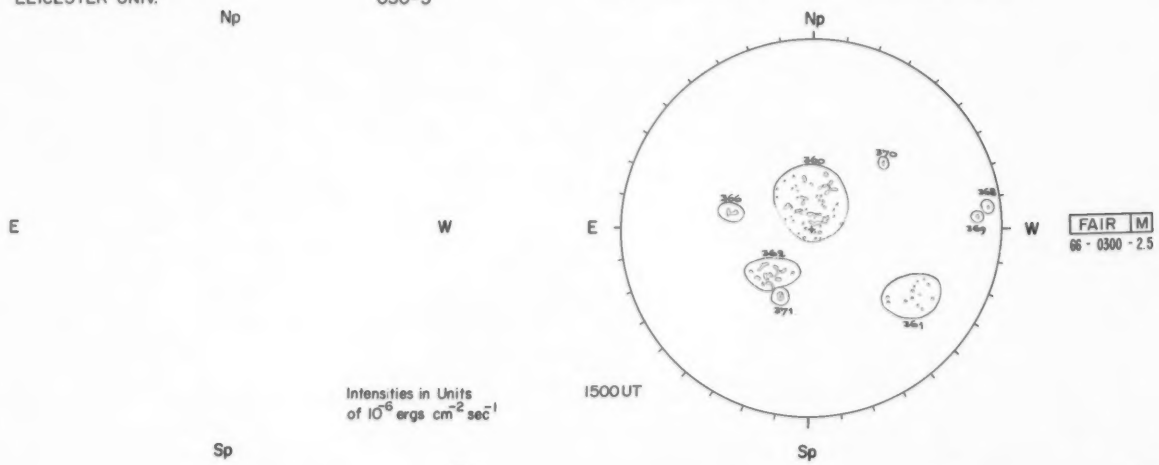
DECEMBER 4, 1974 (P = 15.09, B_o = 0.50, L_o = 295.06)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULBERT

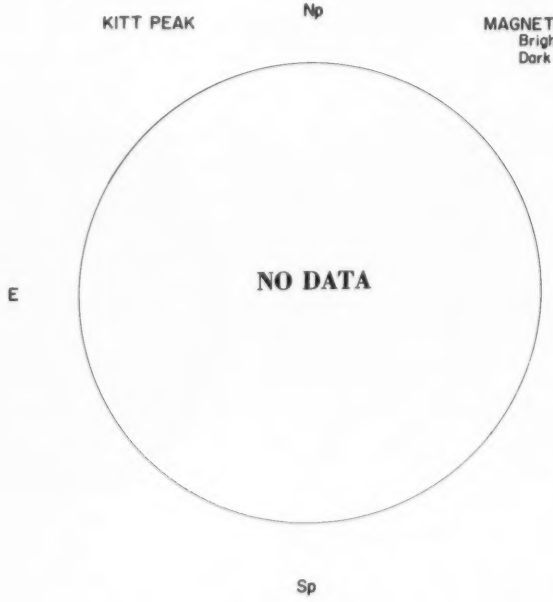
CALCIUM REPORT



Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus



MT. WILSON

DELTAY =
DELTAX =

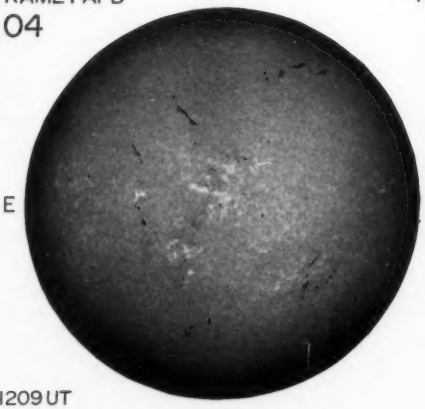
MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

RAMEY AFB
04

Np

Hα



E

W

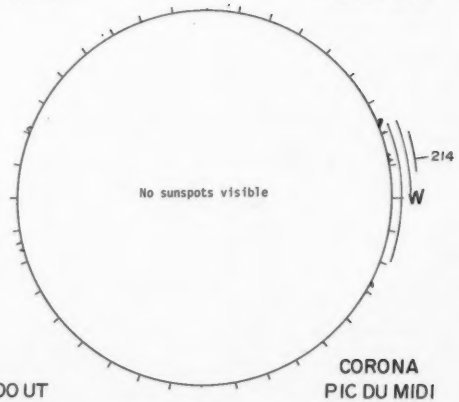
1209 UT

Sp

BOULDER

Np

SUNSPOTS



1600 UT

CORONA
PIC DU MIDI

Sp

NELC LA POSTA

Np

2.0 CM

NO DATA

E

WEATHER

W

Sp

ANT. TEMP. UNIT 100°K

NELC LA POSTA

Np

8.6 MM

NO DATA

E

WEATHER

W

Sp

ANT. TEMP. UNIT 100°K

31
Dec 74

DECEMBER 5, 1974 (P = 14.69, B_o = 0.37, L_o = 281.88)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULBERT

CALCIUM REPORT

Np

E W

NO DATA

Sp

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

NO DATA

MT. WILSON

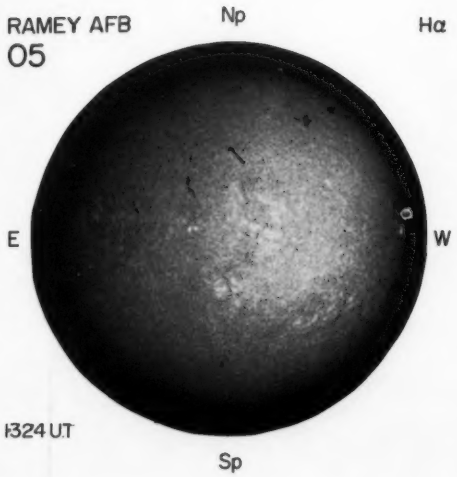
DELTAY = 14.9
DELTAX = 11.2

MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

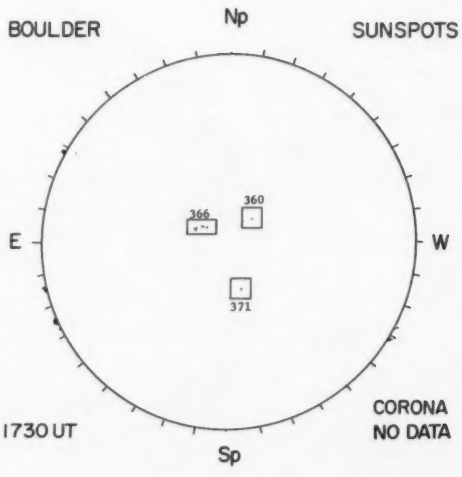
17.37-18.62 UT

RAMEY AFB
05



1324 UT

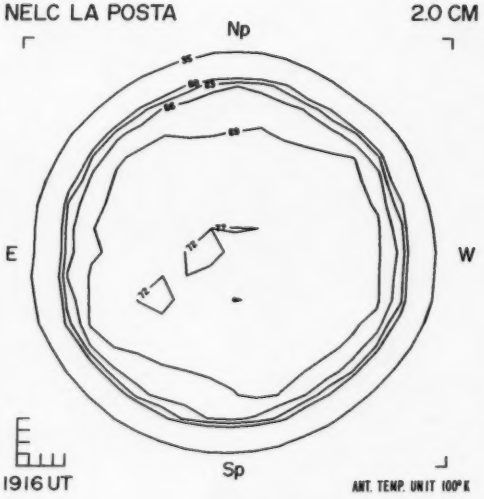
BOULDER



1730 UT

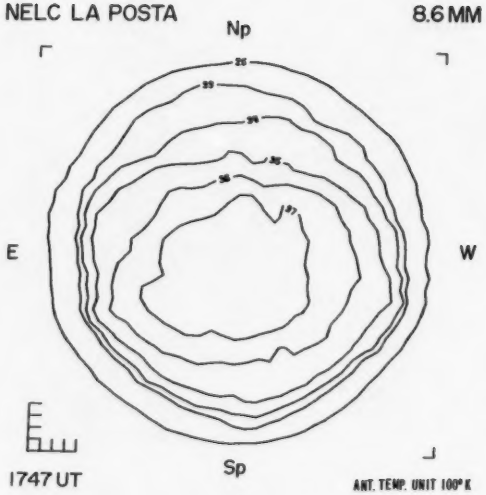
CORONA
NO DATA

NELC LA POSTA



1916 UT

NELC LA POSTA



1747 UT

DECEMBER 6, 1974 (P = 14.28, B_o = 0.24, L_o = 268.71)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

Np

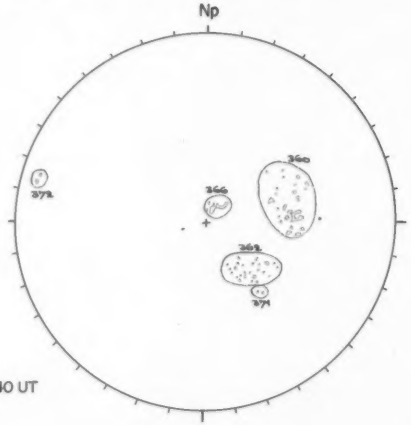
E W

Sp

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HULBERT

CALCIUM REPORT

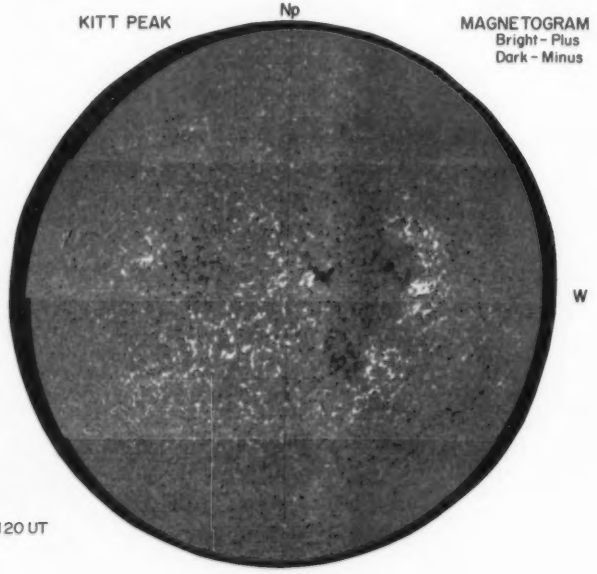


FAIR M

1540 UT

KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

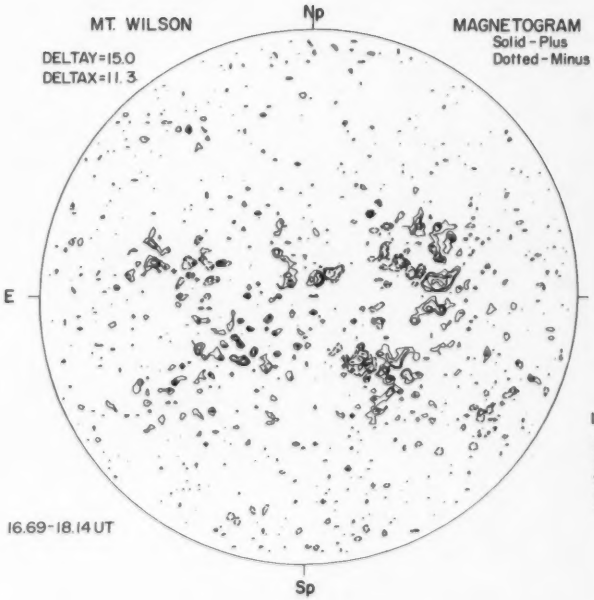


2120 UT

MT. WILSON

DELTAY=15.0
DELTAX=11.3

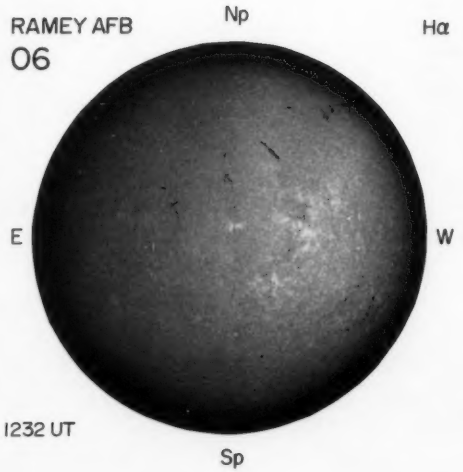
MAGNETOGRAM
Solid - Plus
Dotted - Minus



Levels
± 5
± 10
± 20
± 40
± 80

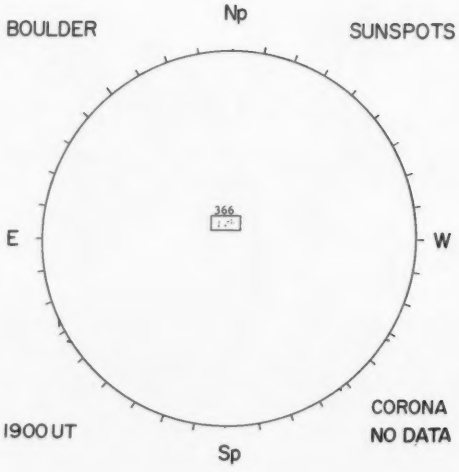
16.69-18.14 UT

RAMEY AFB
06



1232 UT

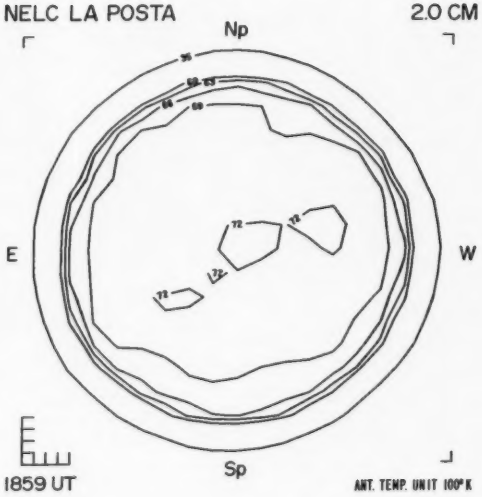
BOULDER



1900 UT

CORONA
NO DATA

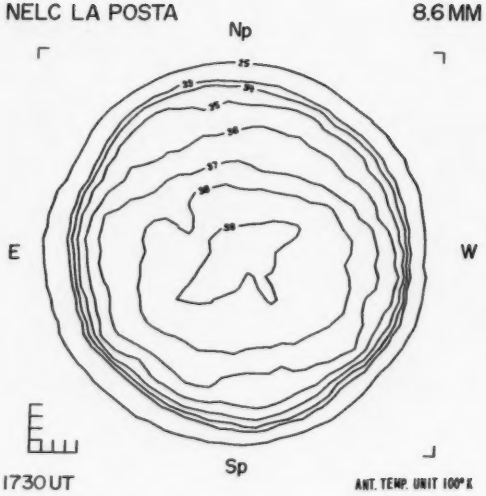
NELC LA POSTA



1859 UT

ANT. TEMP. UNIT 100°K

NELC LA POSTA



1730 UT

ANT. TEMP. UNIT 100°K

DECEMBER 7, 1974 (P = 13.86, B_o = 0.12, L_o = 255.53)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

Np

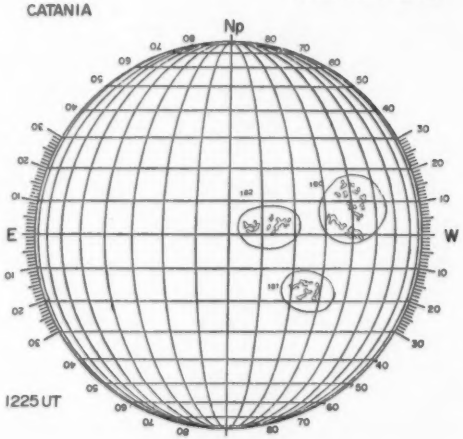
E W

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

Sp

CALCIUM REPORT

CATANIA

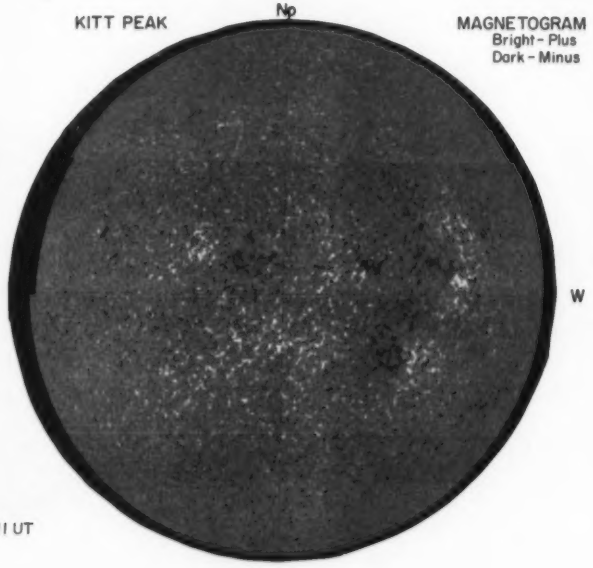


FAIR	GD
80 - 2276	- - -
81 - 0845	- - -
82 - 0985	- - -

1225 UT

KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

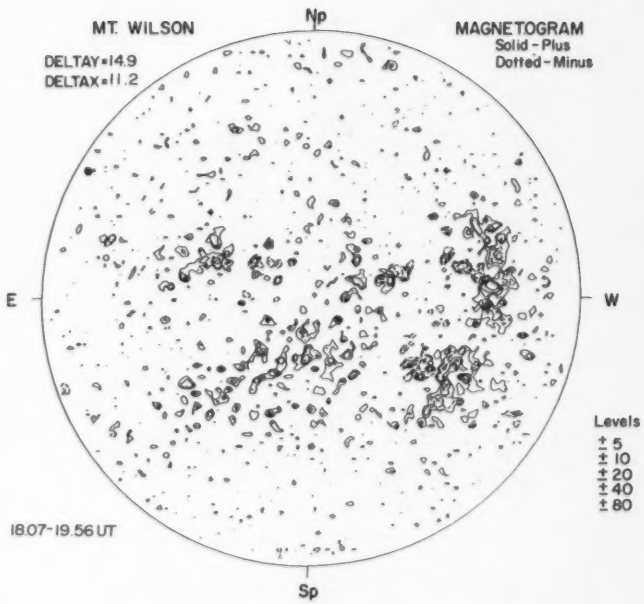


1611 UT

MT. WILSON

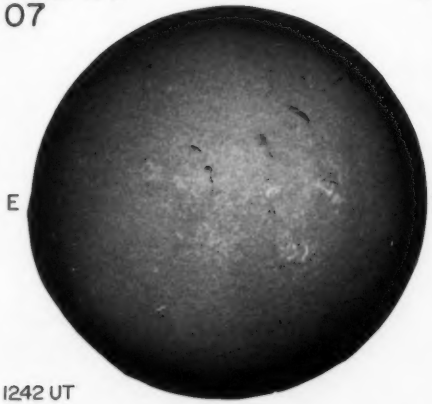
DELTAY = 14.9
DELTAX = 11.2

MAGNETOGRAM
Solid - Plus
Dotted - Minus



18.07-19.56 UT

RAMEY AFB
07



1242 UT

Hα

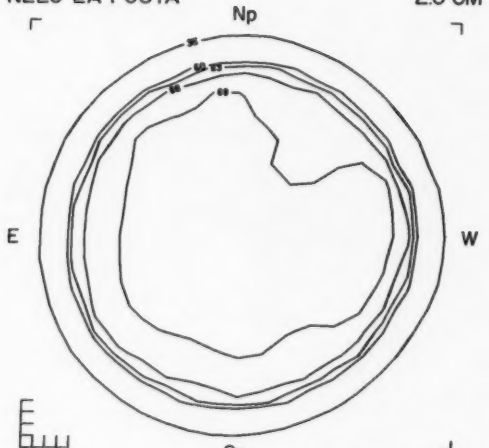
BOULDER

NO DATA

SUNSPOTS

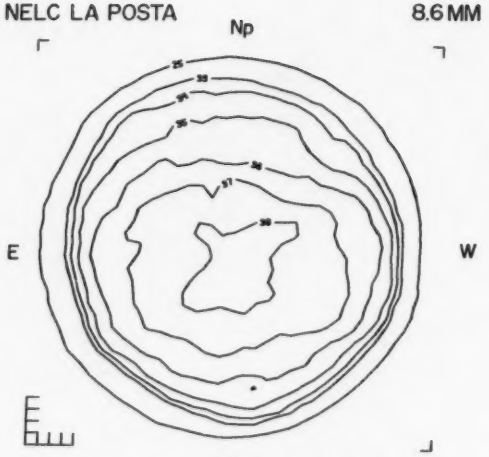
CORONA

NELC LA POSTA 2.0 CM



1916 UT

NELC LA POSTA 8.6 MM



1752 UT

DECEMBER 8, 1974 (P = 13.44, B_o = -0.01, L_o = 242.35)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

Np

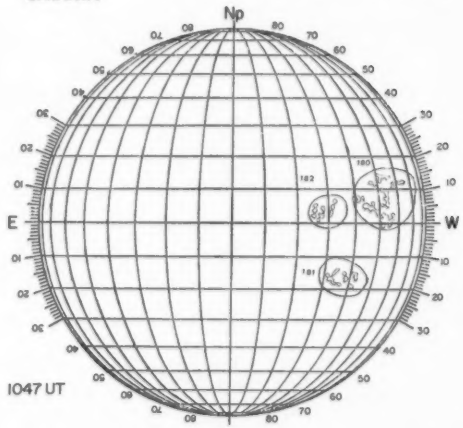
E W

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

Sp

CATANIA

CALCIUM REPORT

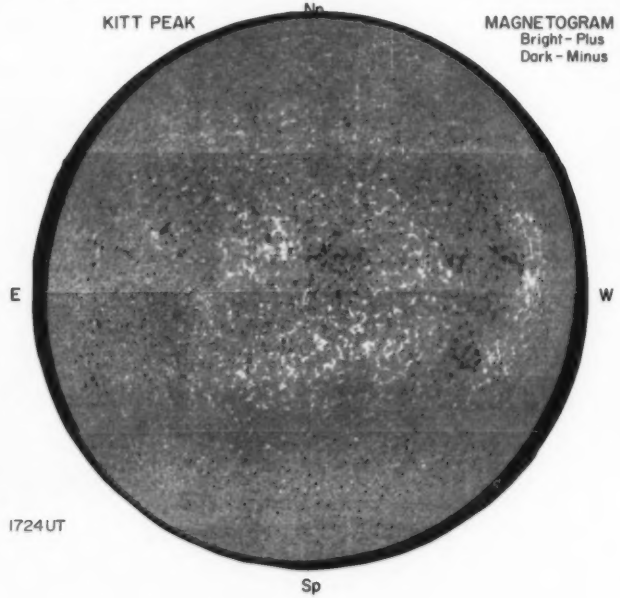


POOR | GD

1047 UT

KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

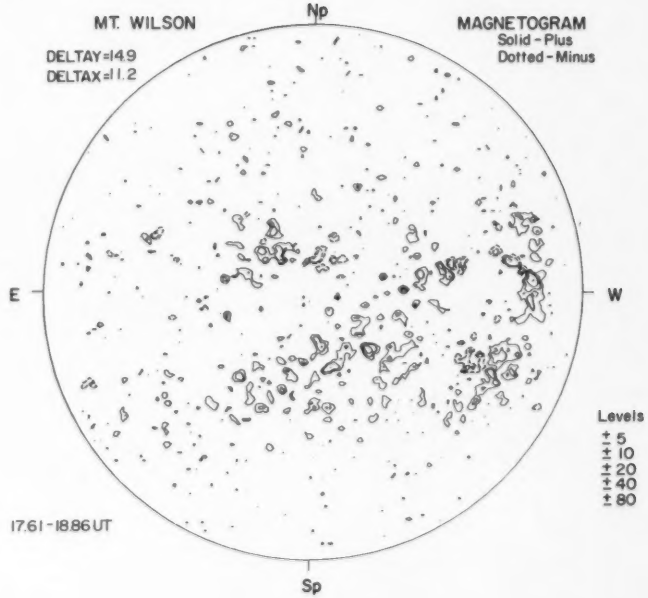


1724 UT

MT. WILSON

DELTAY=14.9
DELTAX=11.2

MAGNETOGRAM
Solid - Plus
Dotted - Minus



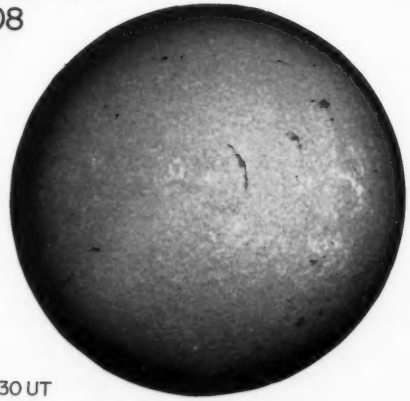
Levels
± 5
± 10
± 20
± 40
± 80

17.61 - 18.86 UT

RAMEY AFB
08

Np

Hα



E

W

1230 UT

Sp

BOULDER

Np

SUNSPOTS

No sunspots visible

E

W

1700 UT

CORONA
NO DATA

Sp

NELC LA POSTA

Np

2.0 CM

NO DATA

E

WEATHER

W

Sp

ANT. TEMP. UNIT 100°K

NELC LA POSTA

Np

8.6 MM

NO DATA

E

WEATHER

W

Sp

ANT. TEMP. UNIT 100°K

DECEMBER 9, 1974 (P = 13.02, B_o = -0.14, L_o = 229.17)

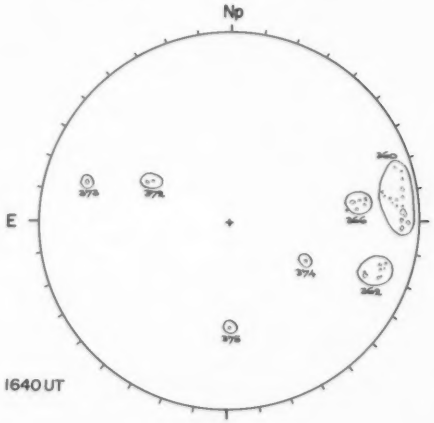
UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

Np
E W
Sp

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HULBERT



1640 UT

CALCIUM REPORT

FAIR | M

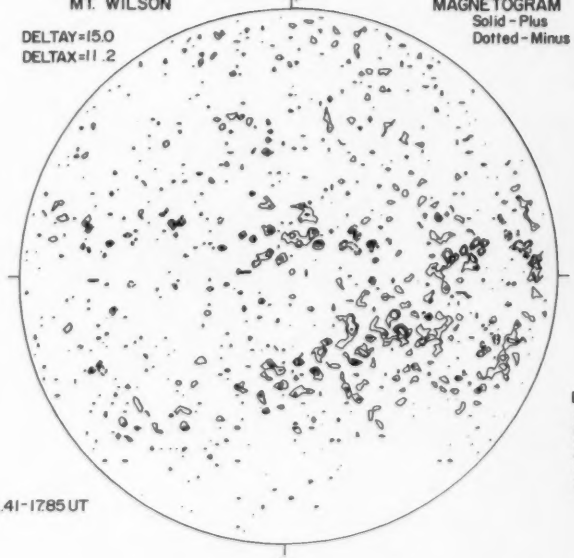
KITT PEAK

Np
E
NO DATA
W
Sp

MAGNETOGRAM
Bright - Plus
Dark - Minus

MT. WILSON

DELTAY=15.0
DELTAX=11.2

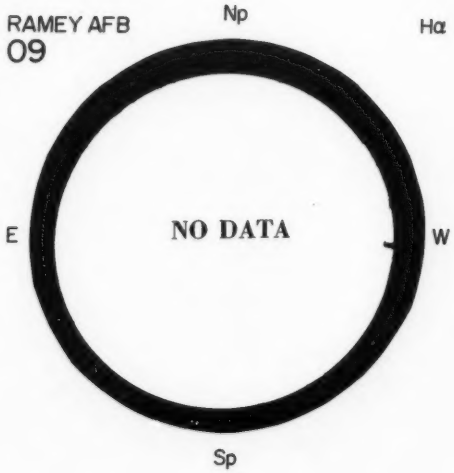


16.41-17.85 UT

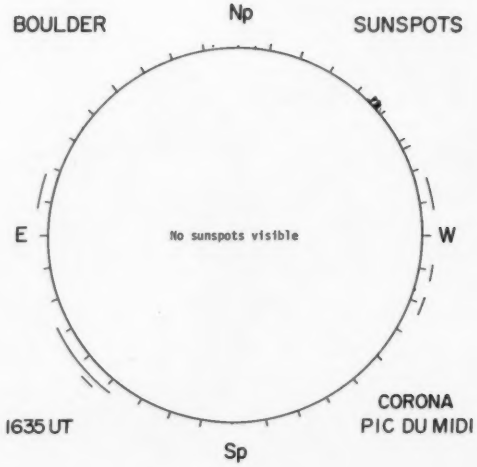
MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

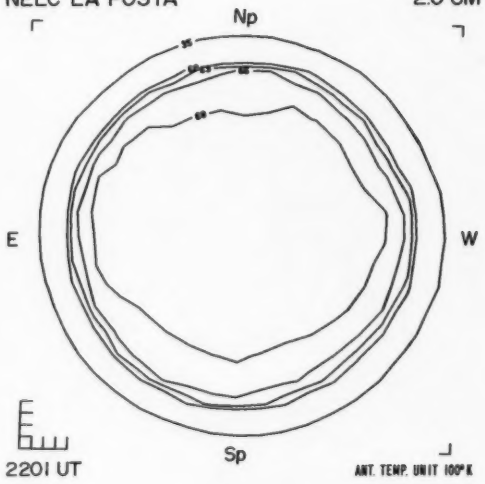
RAMEY AFB
09



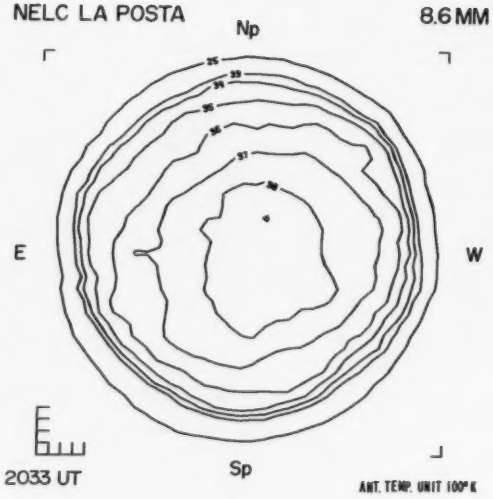
BOULDER



NELC LA POSTA



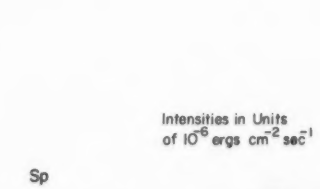
NELC LA POSTA



DECEMBER 10, 1974 (P = 12.59, B_o = -0.27, L_o = 216.00)

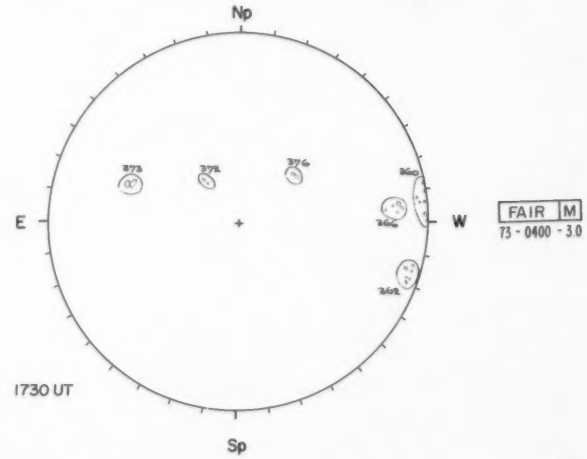
UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5



Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HULBERT

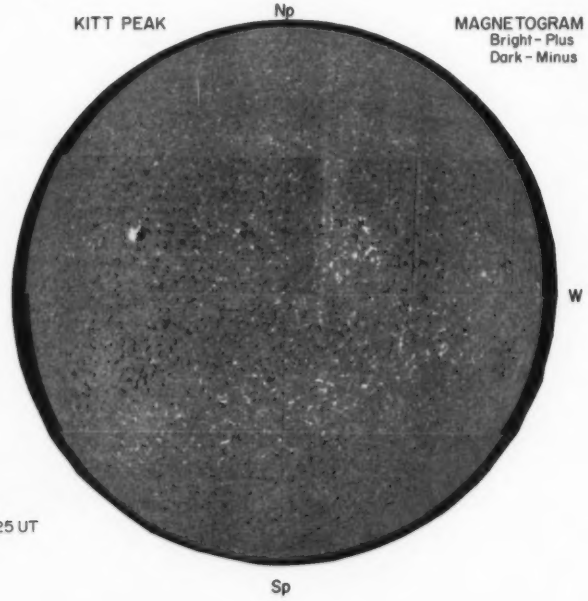


1730 UT

CALCIUM REPORT

FAIR | M
73 - 0400 - 3.0

KITT PEAK

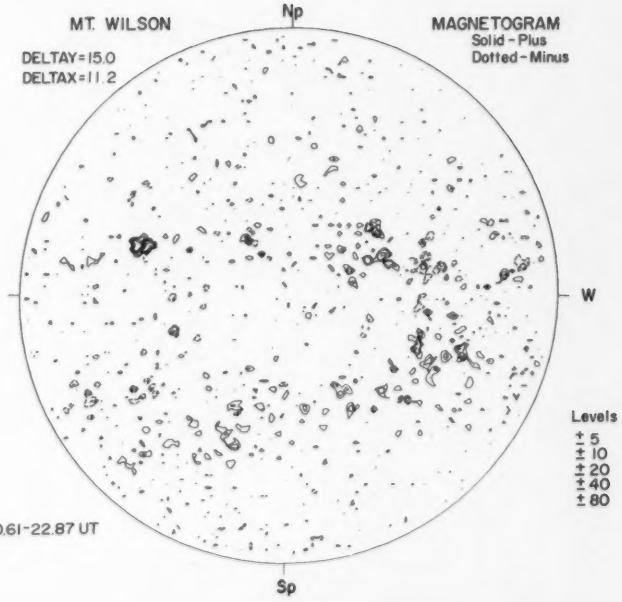


MAGNETOGRAM
Bright - Plus
Dark - Minus

1625 UT

MT. WILSON

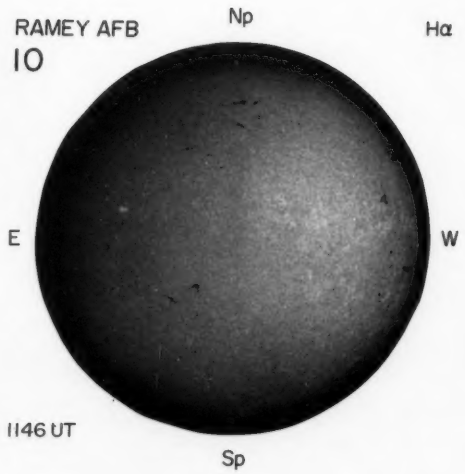
DELTAY = 15.0
DELTAX = 11.2

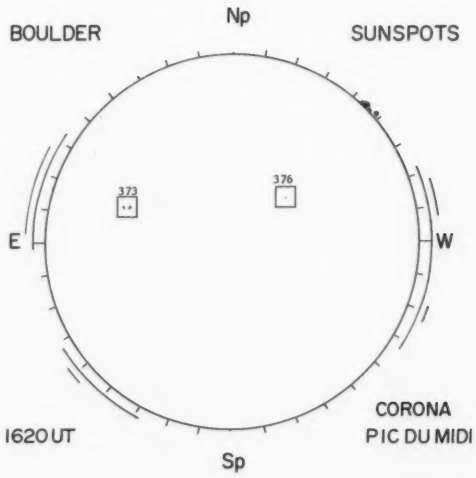


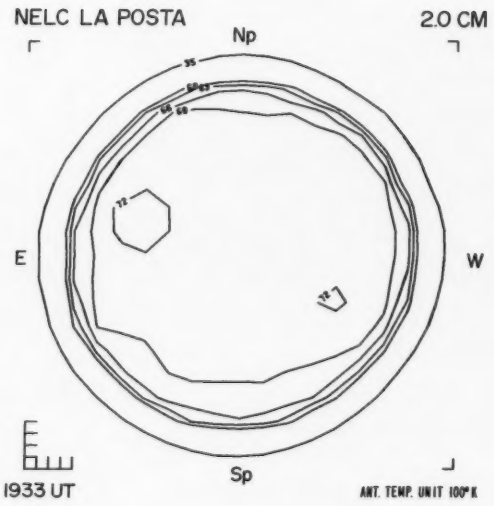
MAGNETOGRAM
Solid - Plus
Dotted - Minus

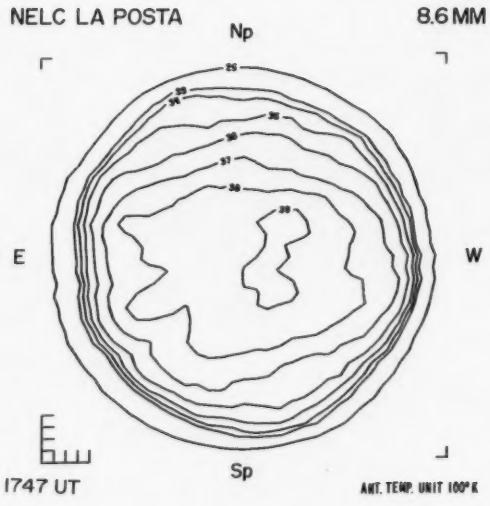
Levels
± 5
± 10
± 20
± 40
± 80

20.61 - 22.87 UT


RAMEY AFB
Np
Hα
10
E
W
1146 UT
Sp


BOULDER
Np
SUNSPOTS
373
376
E
W
1620 UT
Sp
CORONA
PIC DU MIDI


NELC LA POSTA
2.0 CM
Np
E
W
Sp
1933 UT
ANT. TEMP. UNIT 100°K


NELC LA POSTA
8.6 MM
Np
E
W
Sp
1747 UT
ANT. TEMP. UNIT 100°K

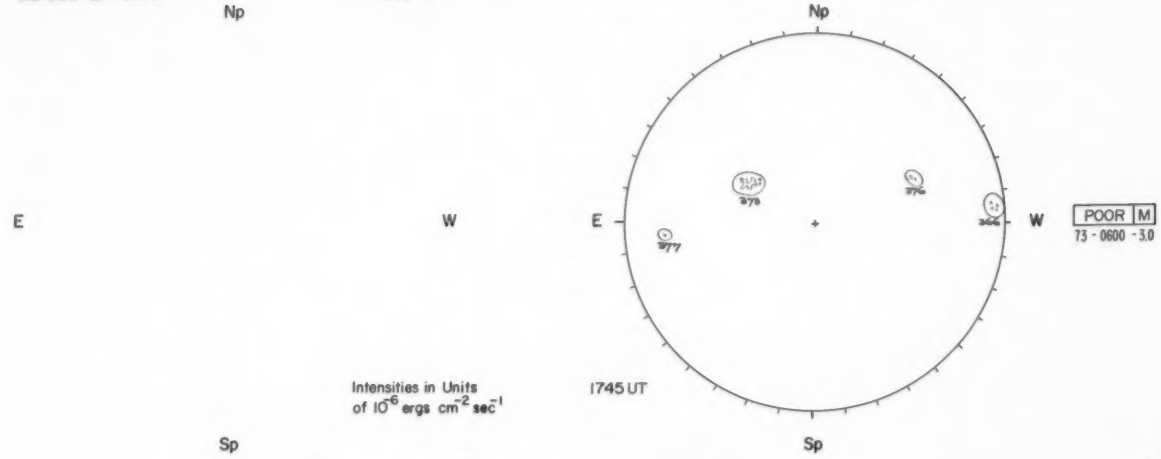
DECEMBER 11, 1974 (P = 12.16, B_o = -0.40, L_o = 202.82)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULBERT

CALCIUM REPORT

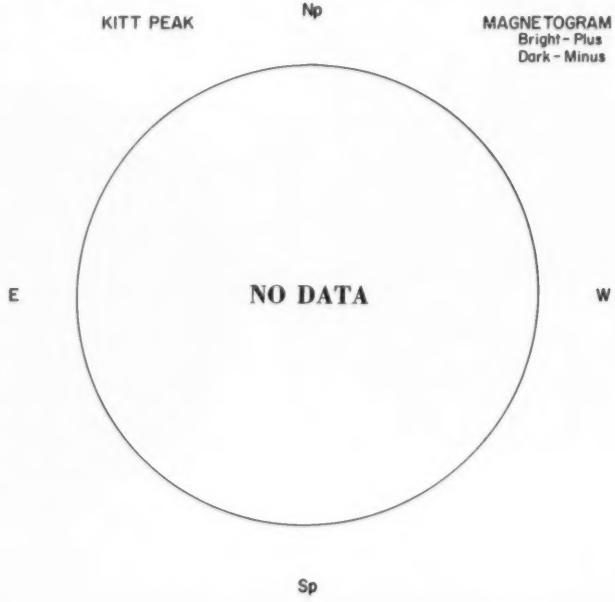


Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1745 UT

KITT PEAK

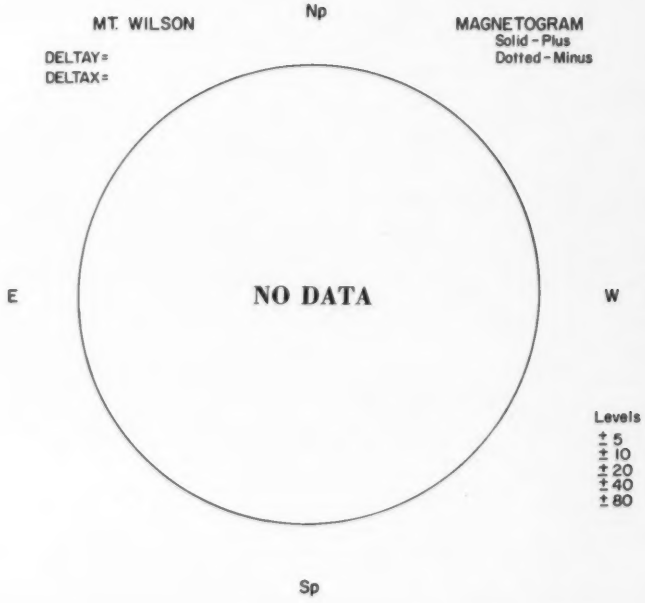
MAGNETOGRAM
Bright - Plus
Dark - Minus



MT. WILSON

DELTAY =
DELTAX =

MAGNETOGRAM
Solid - Plus
Dotted - Minus

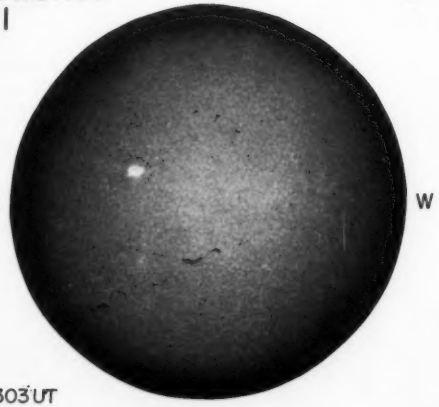


Levels
± 5
± 10
± 20
± 40
± 80

RAMEY AFB

Np

Hα

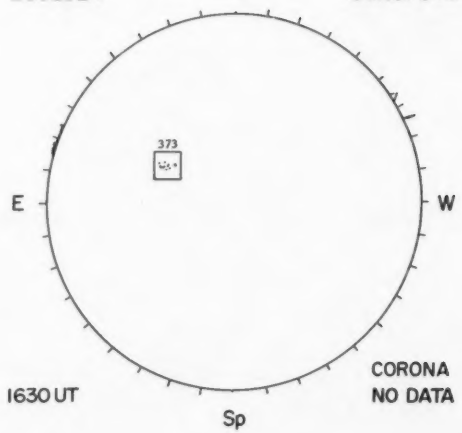


1303 UT

BOULDER

Np

SUNSPOTS



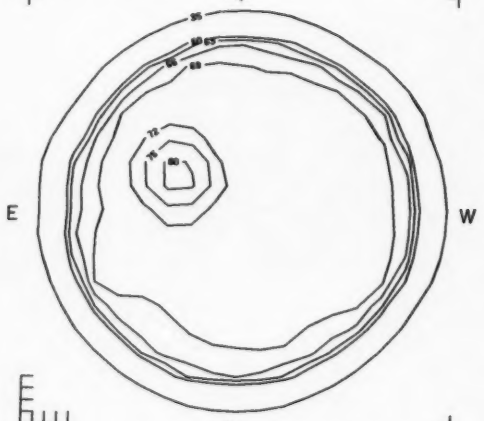
1630 UT

CORONA
NO DATA

NELC LA POSTA

Np

2.0 CM



1917 UT

ANT. TEMP. UNIT 100°K

NELC LA POSTA

Np

8.6 MM

NO DATA

E

CALIBRATION

W

Sp

2251 UT

ANT. TEMP. UNIT 100°K

DECEMBER 12, 1974 (P = 11.72, B_o = -0.52, L_o = 189.65)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

Np

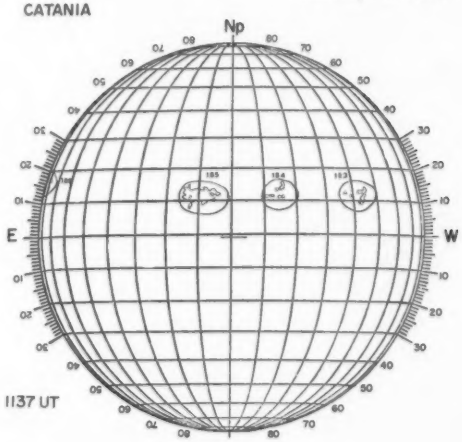
E W

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

Sp

CATANIA

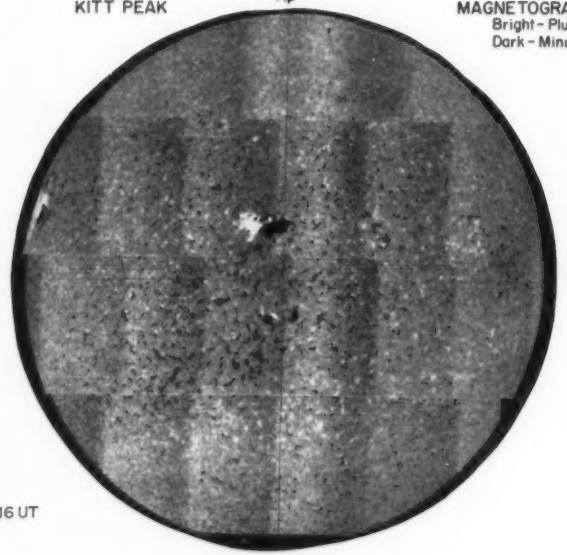
CALCIUM REPORT



FAIR	GD
85 - 1613	- - -
86 - 1587	- - -

1137 UT

KITT PEAK



MAGNETOGRAM
Bright - Plus
Dark - Minus

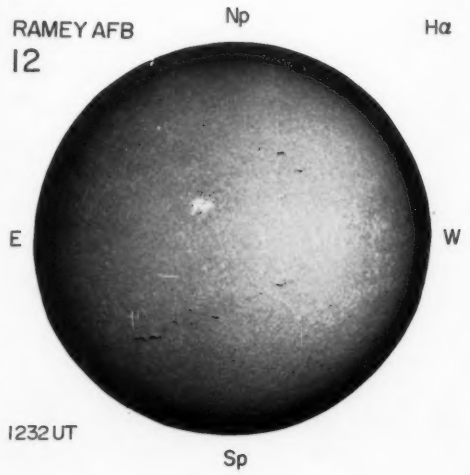
2016 UT

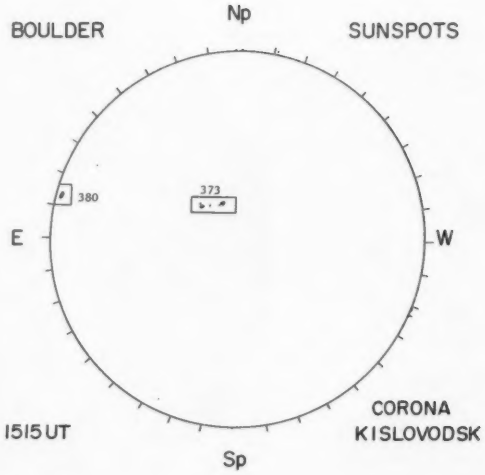
MT. WILSON

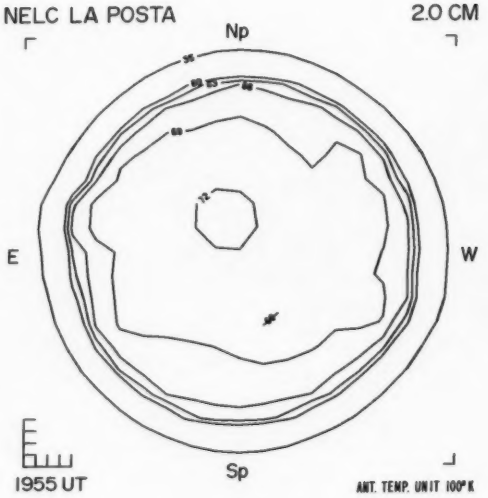
DELTAY=
DELTAX=

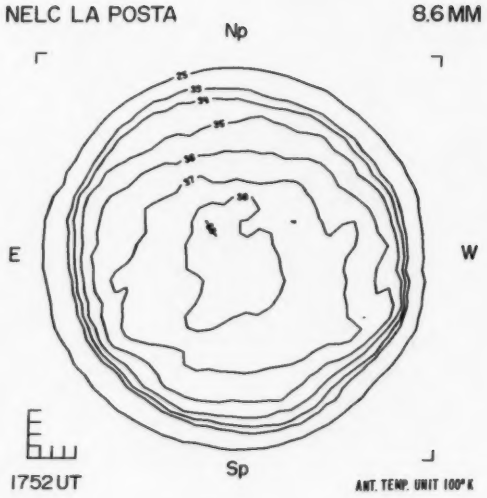
MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80


RAMEY AFB
12
Np
Hα
E
W
Sp
1232 UT


BOULDER
Np
SUNSPOTS
380
373
E
W
Sp
1515 UT
CORONA
KISLOVODSK


NELC LA POSTA
2.0 CM
Np
E
W
Sp
1955 UT
ANT. TEMP. UNIT 100°K


NELC LA POSTA
8.6 MM
Np
E
W
Sp
1752 UT
ANT. TEMP. UNIT 100°K

DECEMBER 13, 1974 (P = 11.28, B_o = -0.65, L_o = 176.47)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

Np

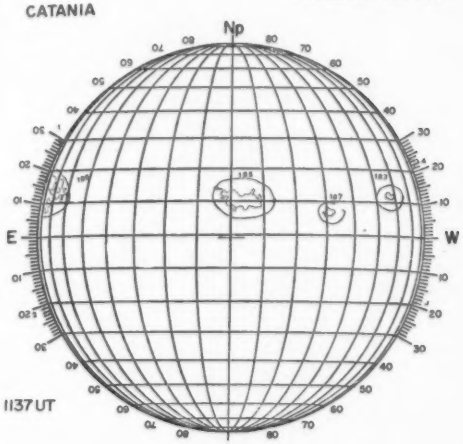
E W

Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

Sp

CALCIUM REPORT

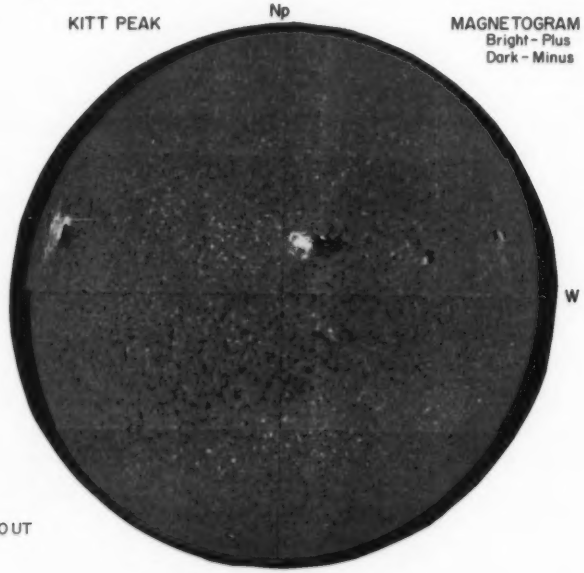
CATANIA



	FAIR	GD
85 - 2028	---	
86 - 2669	---	

1137 UT

KITT PEAK

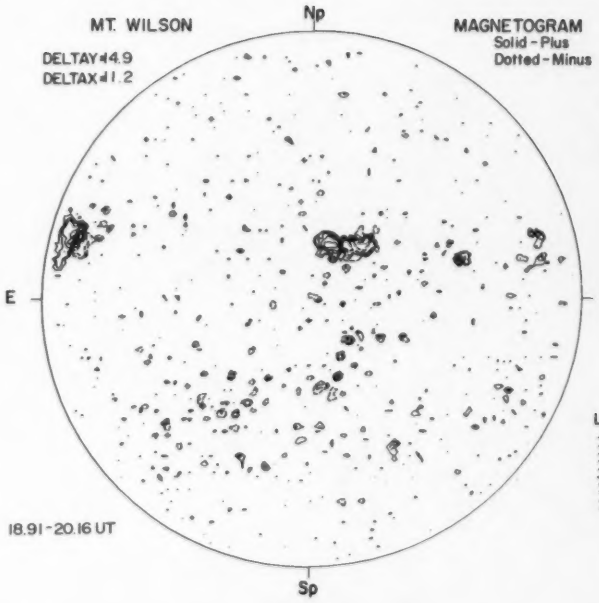


MAGNETOGRAM
Bright - Plus
Dark - Minus

1720 UT

MT. WILSON

DELTAY = 4.9
DELTAX = 1.2

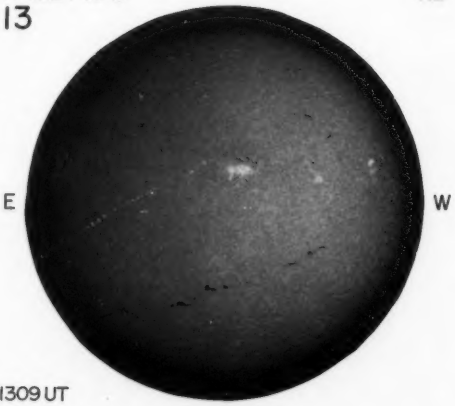


MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
±5
±10
±20
±40
±80

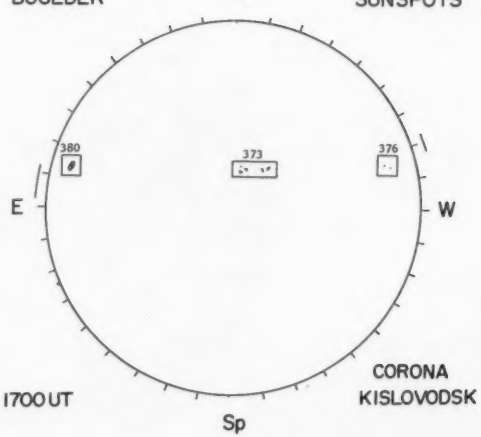
18.91 - 20.16 UT

RAMEY AFB
13



1309 UT

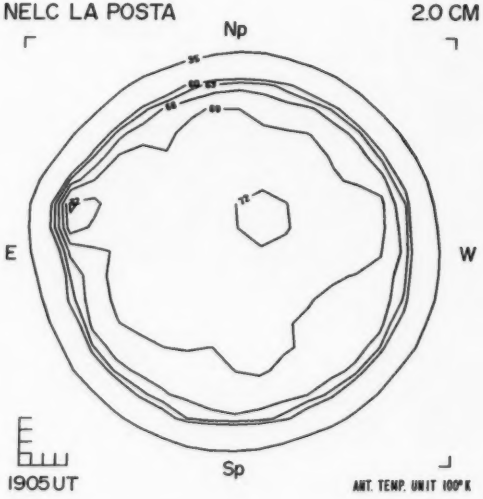
BOULDER



1700 UT

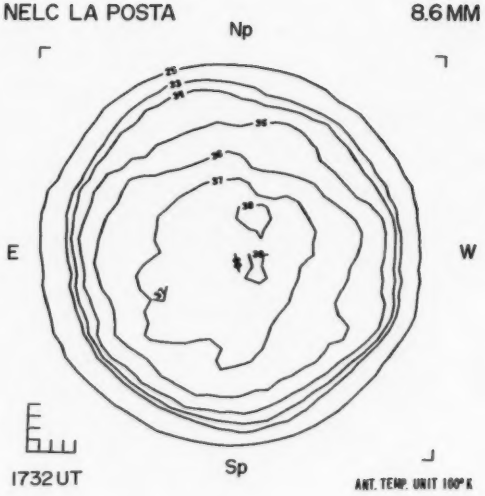
CORONA
KISLOVODSK

NELC LA POSTA



1905 UT

NELC LA POSTA



1732 UT

DECEMBER 14, 1974 (P = 10.83, B_o = -0.78, L_o = 163.30)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

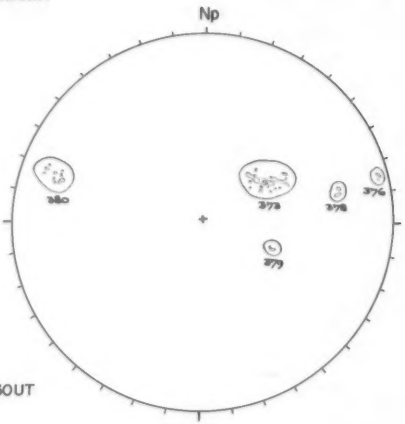
Np
E W
Sp

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1830 UT

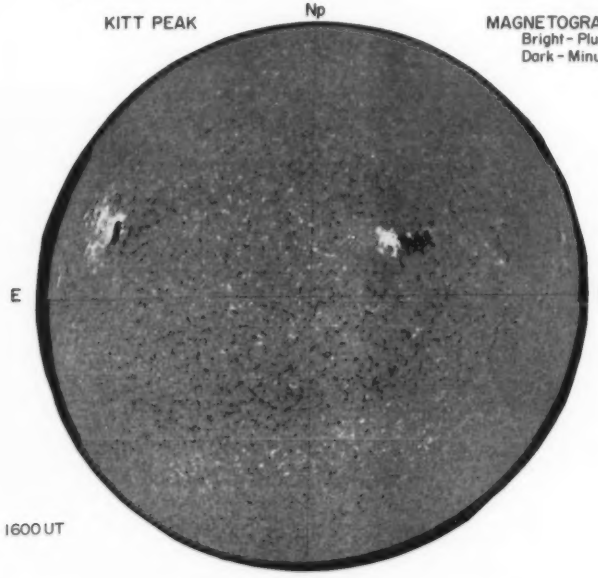
CATANIA

CALCIUM REPORT



V	POOR	S
73 - 1100		- 3 0
80 - 0800		- 4 5

KITT PEAK

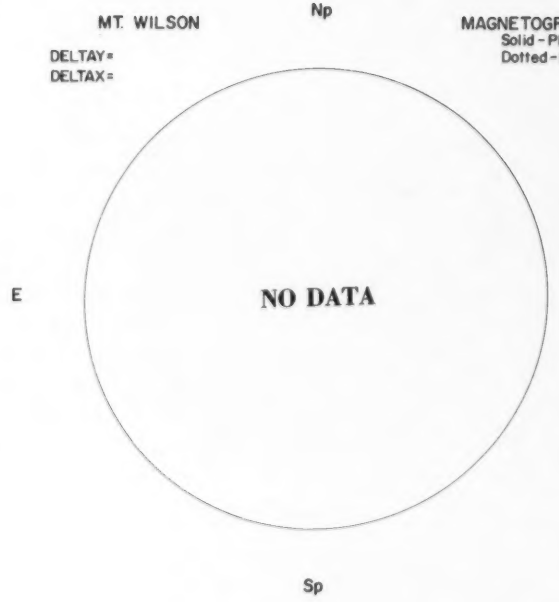


1600 UT

MAGNETOGRAM
Bright - Plus
Dark - Minus

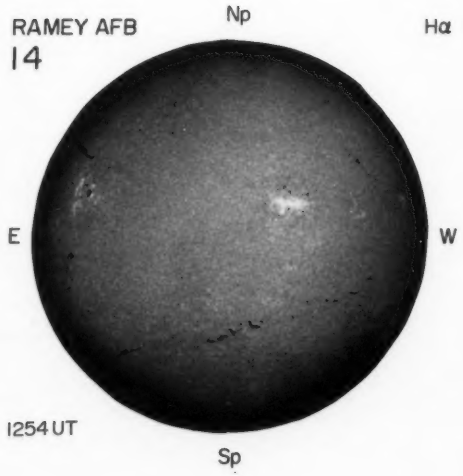
MT. WILSON

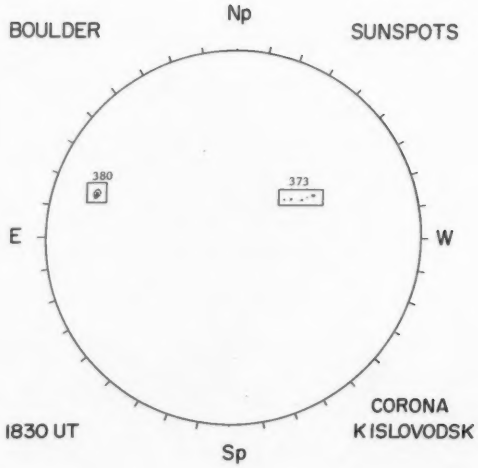
DELTAY =
DELTAX =

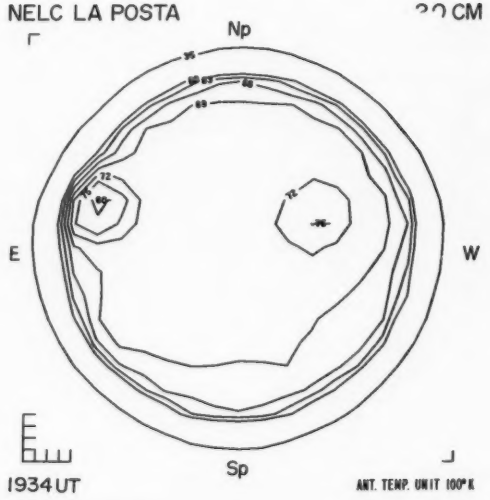


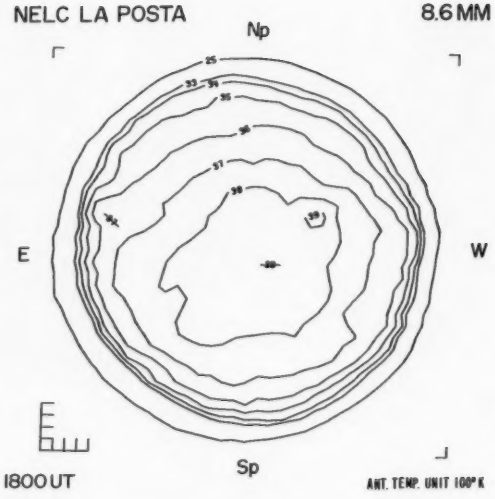
MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80


RAMEY AFB
14
Np
Hα
E
W
Sp
1254 UT


BOULDER
Np
SUNSPOTS
380
373
E
W
Sp
1830 UT
CORONA
KISLOVODSK


NELC LA POSTA
Np
E
W
Sp
1934 UT
ANT. TEMP. UNIT 100°K


NELC LA POSTA
8.6 MM
Np
E
W
Sp
1800 UT
ANT. TEMP. UNIT 100°K

DECEMBER 15, 1974 (P = 10.38, B_o = -0.91, L_o = 150.12)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

Np

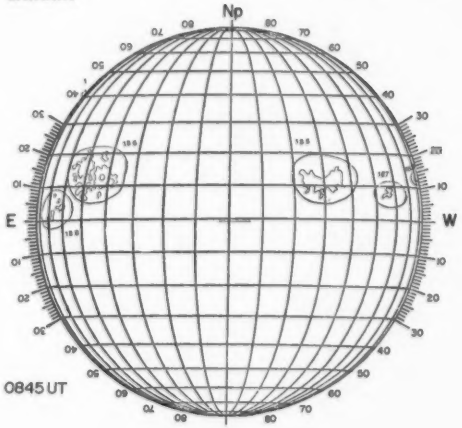
E W

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

Sp

CALCIUM REPORT

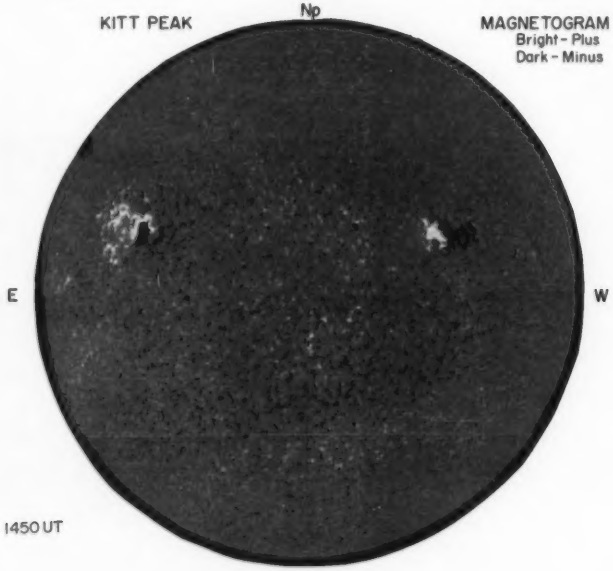
CATANIA



FAIR | SS
85 - 2879 - - -
86 - 5290 - - -

0845 UT

KITT PEAK



MAGNETOGRAM
Bright - Plus
Dark - Minus

1450 UT

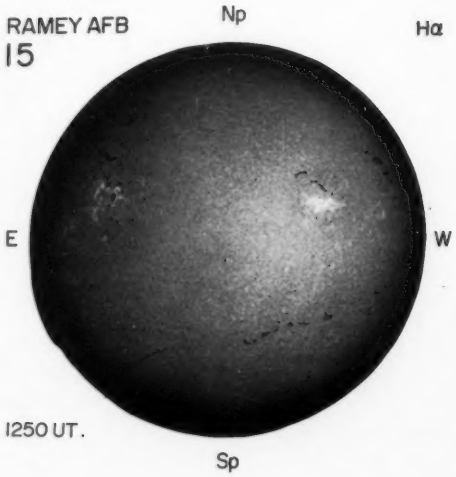
MT. WILSON

DELTAY =
DELTAX =

MAGNETOGRAM
Solid - Plus
Dotted - Minus

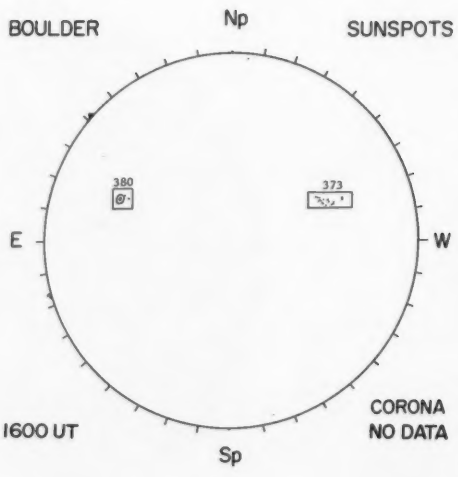
Levels
± 5
± 10
± 20
± 40
± 80

RAMEY AFB
15



1250 UT.

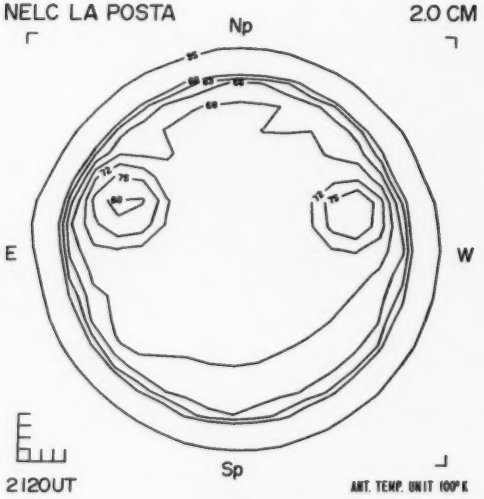
BOULDER



1600 UT

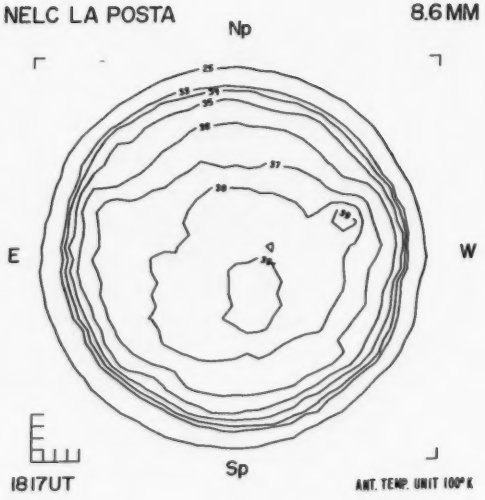
CORONA
NO DATA

NELC LA POSTA



2120UT

NELC LA POSTA



1817UT

DECEMBER 16, 1974 (P = 9.93, B_o = -1.03, L_o = 136.95)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

Np

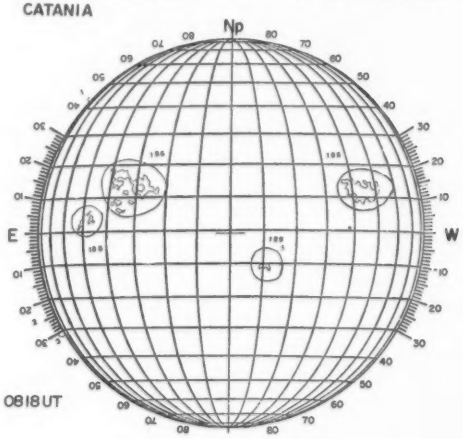
E W

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

Sp

McMATH-HULBERT
CATANIA

CALCIUM REPORT

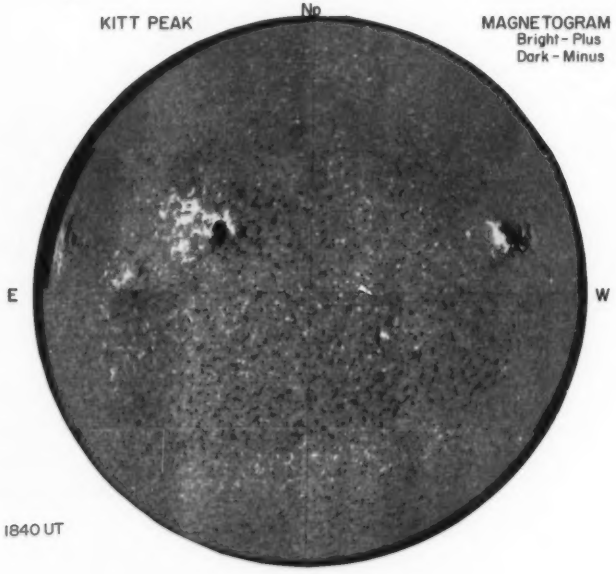


	FAIR	GD
85 - 2629	---	
86 - 2566	---	

0818 UT

KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

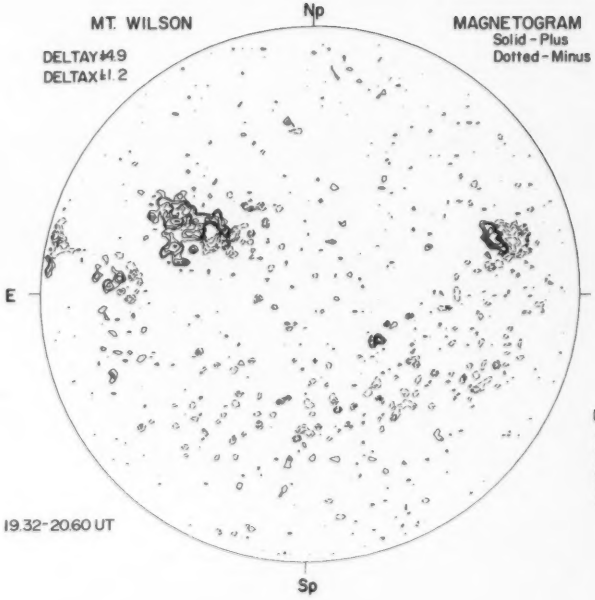


1840 UT

MT. WILSON

DELTAY 4.9
DELTAX 1.2

MAGNETOGRAM
Solid - Plus
Dotted - Minus

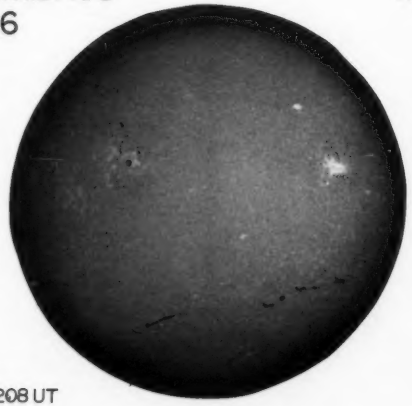


Levels
± 5
± 10
± 20
± 40
± 80

19.32-20.60 UT

RAMEY AFB Np Hα

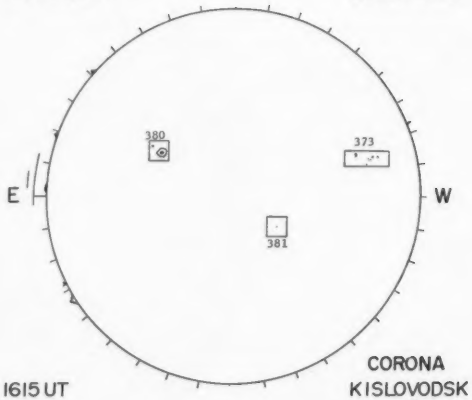
16



E W

1208 UT Sp

BOULDER Np SUNSPOTS



E W

1615 UT Sp CORONA KISLOVODSK

NELC LA POSTA Np 2.0 CM

NO DATA

E CALIBRATION W

1940 UT Sp

ANT. TEMP. UNIT 100°K

NELC LA POSTA Np 8.6 MM

NO DATA

E CALIBRATION W

1753 UT Sp

ANT. TEMP. UNIT 100°K

55
Dec 74

DECEMBER 17, 1974 (P = 9.47, B_o = -1.16, L_o = 123.77)

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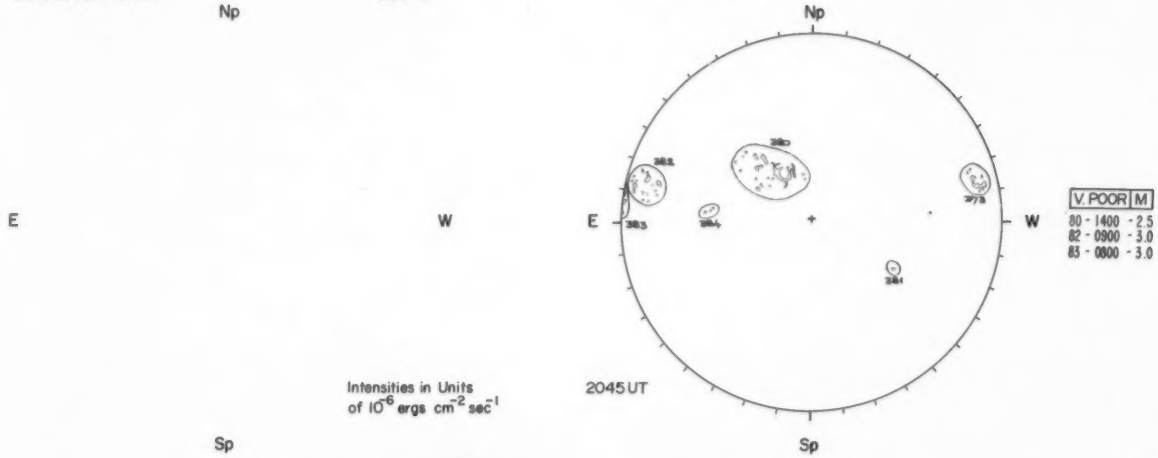
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULBERT

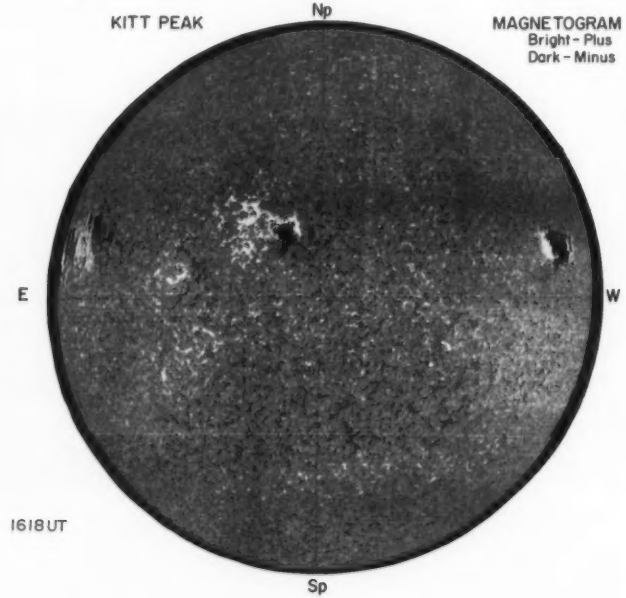
CALCIUM REPORT



Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

KITT PEAK

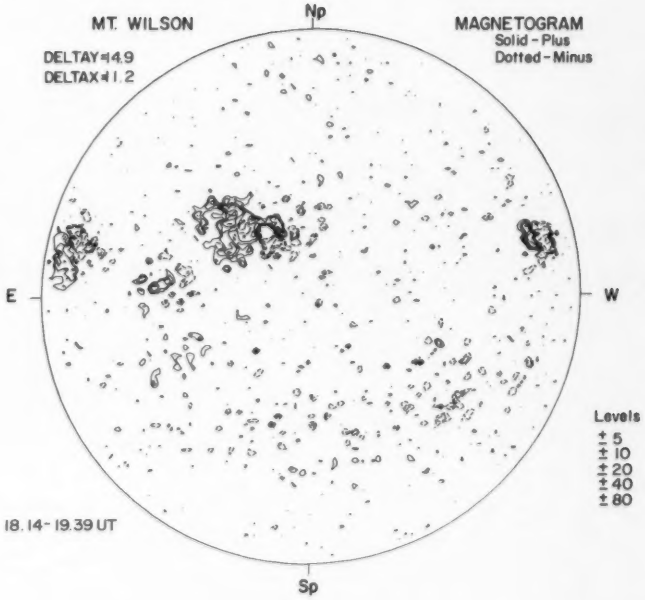
MAGNETOGRAM
Bright - Plus
Dark - Minus



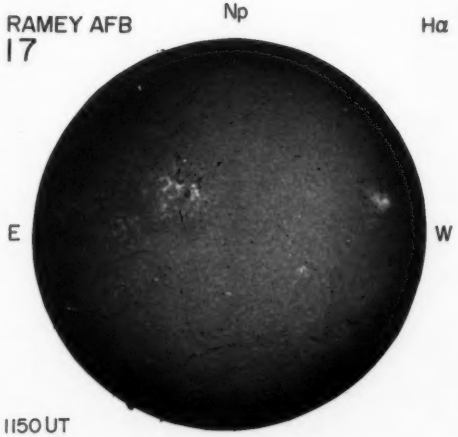
MT. WILSON

DELTAY=14.9
DELTAX=11.2

MAGNETOGRAM
Solid - Plus
Dotted - Minus

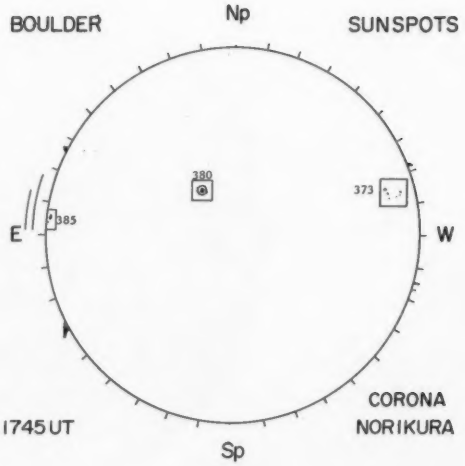


RAMEY AFB
17



1150 UT

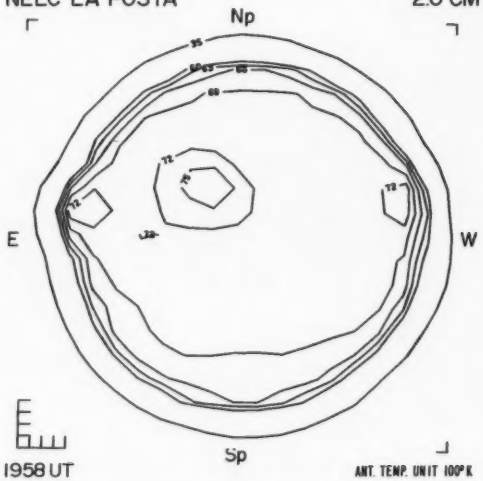
BOULDER



1745 UT

CORONA
NORIKURA

NELC LA POSTA



1958 UT

ANT. TEMP. UNIT 100°K

NELC LA POSTA

1801 UT

ANT. TEMP. UNIT 100°K

DECEMBER 18, 1974 (P = 9.01, B_o = -1.29, L_o = 110.60)

UNIV. COLLEGE LONDON
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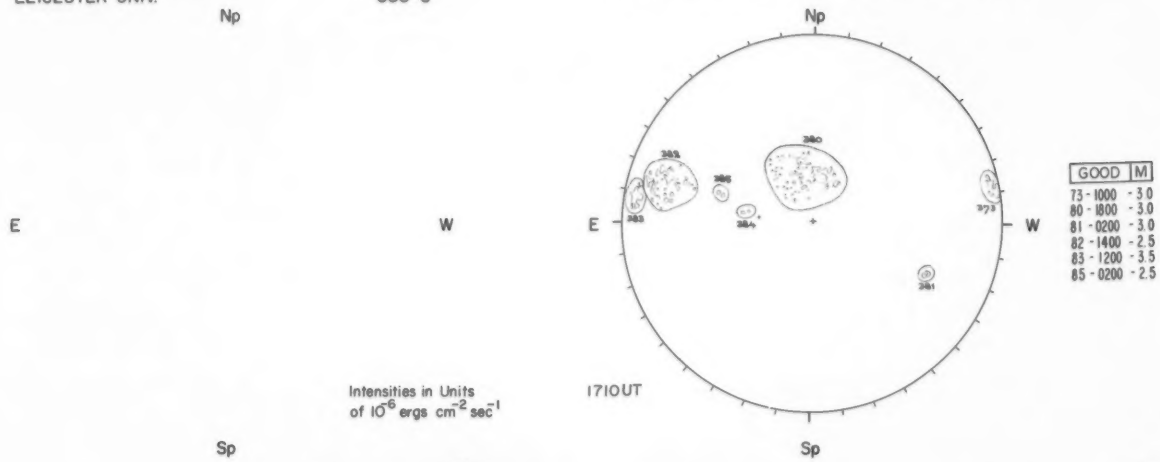
X-RAY
OSO-5

McMATH-HULBERT

CALCIUM REPORT

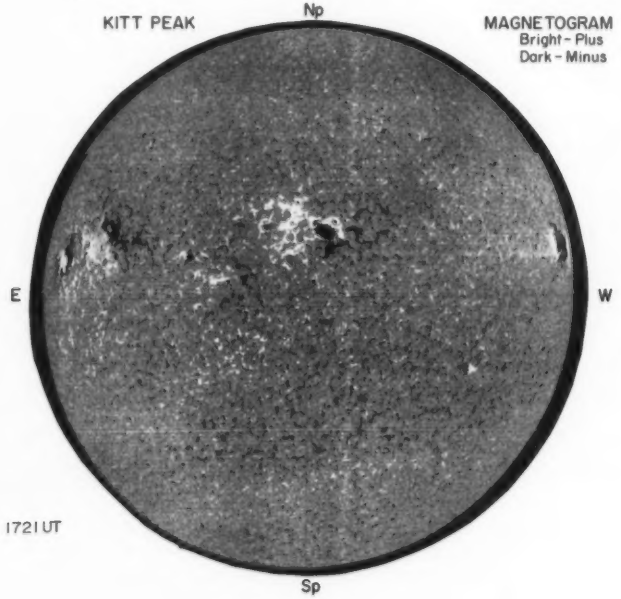


Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

1710 UT

KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

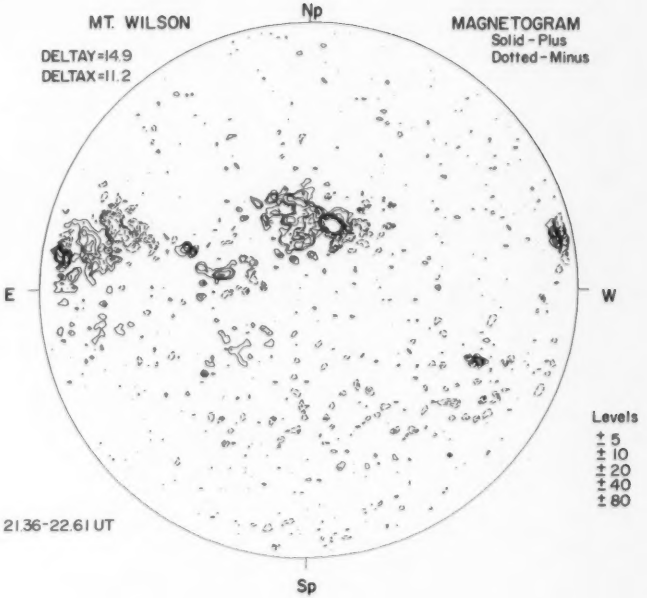


1721 UT

MT. WILSON

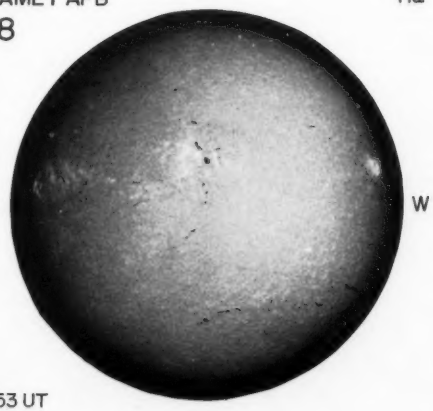
DELTAY=14.9
DELTAX=11.2

MAGNETOGRAM
Solid - Plus
Dotted - Minus



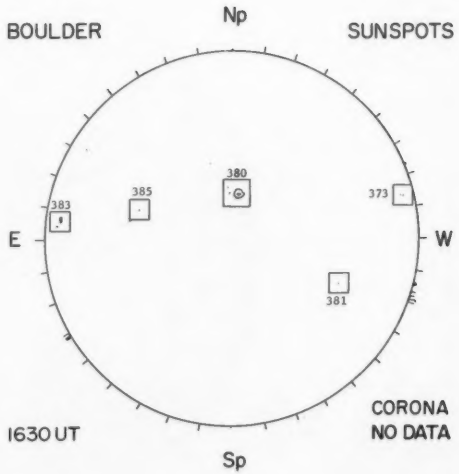
2136-2261 UT

RAMEY AFB
18



1153 UT

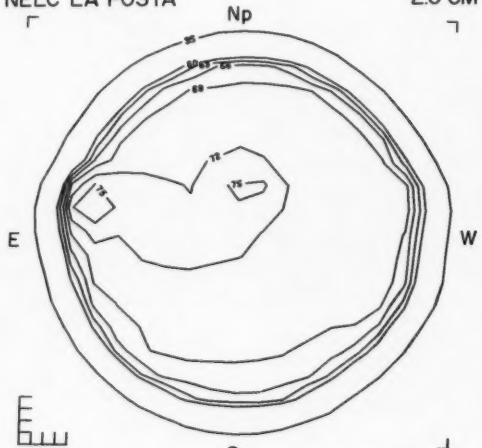
BOULDER



1630 UT

CORONA
NO DATA

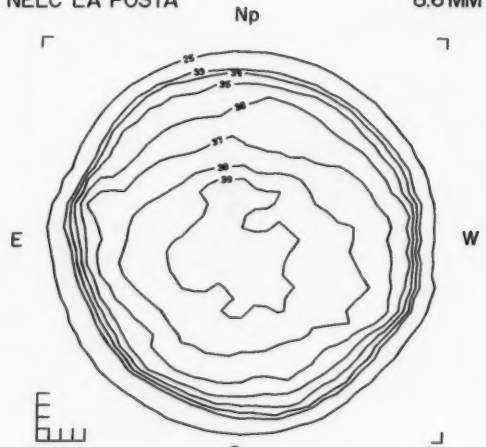
NELC LA POSTA 2.0 CM



1939 UT

ANT. TEMP. UNIT 100°K

NELC LA POSTA 8.6 MM



1755 UT

ANT. TEMP. UNIT 100°K

DECEMBER 19, 1974 (P = 8.54, B_o = -1.41, L_o = 97.42)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

Np

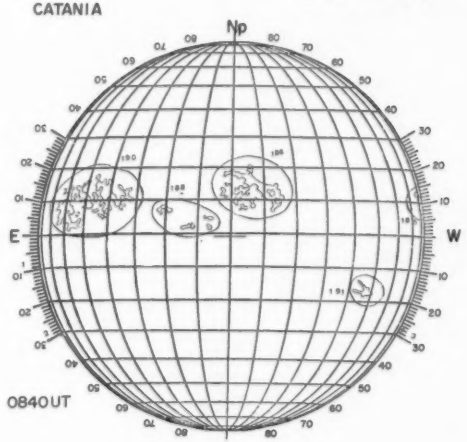
E W

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

Sp

CALCIUM REPORT

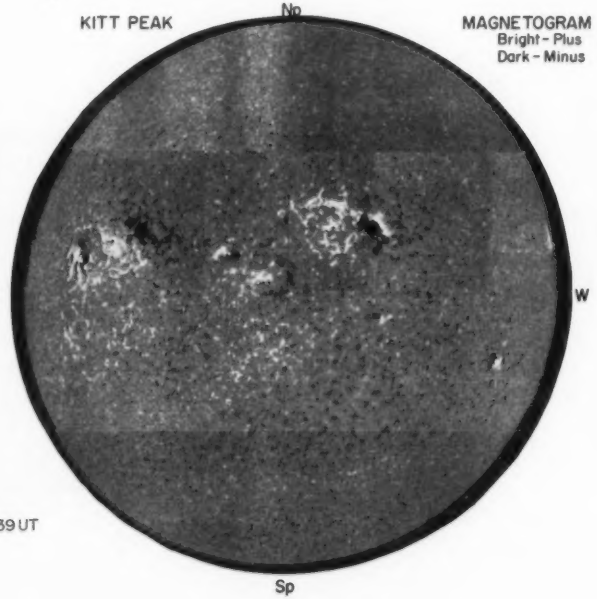
CATANIA



GOOD	SS
85 - 3127	---
91 - 0672	---
86 - 2988	---
88 - 0587	---
90 - 6750	---

0840UT

KITT PEAK

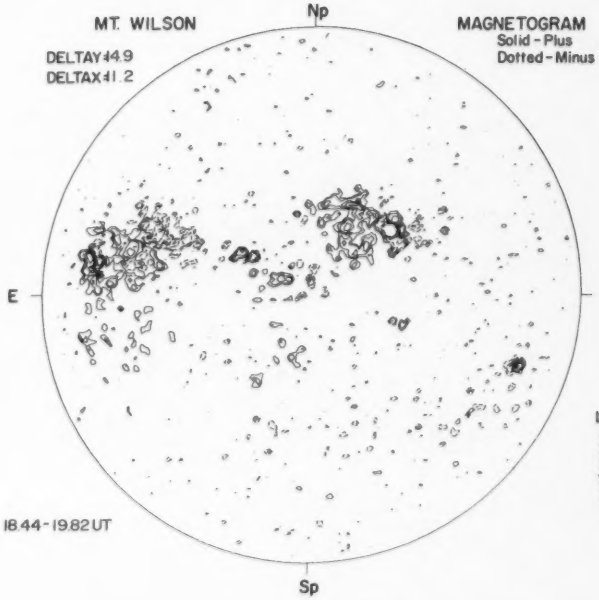


MAGNETOGRAM
Bright - Plus
Dark - Minus

1739UT

MT. WILSON

DELTAY 44.9
DELTAX 41.2

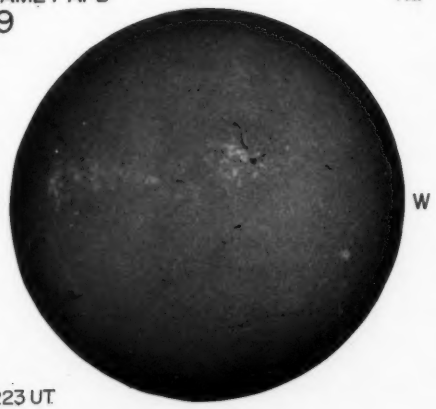


MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

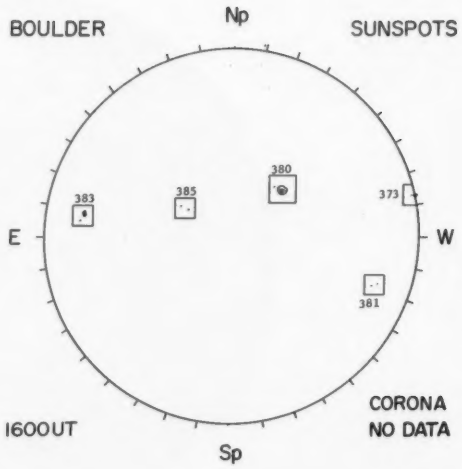
18.44 - 19.82UT

RAMEY AFB
19



1223 UT

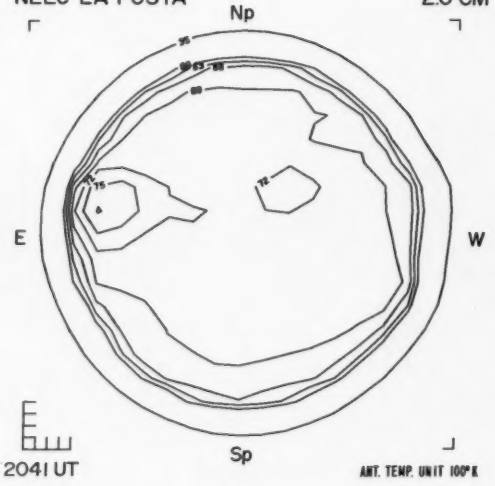
BOULDER



1600 UT

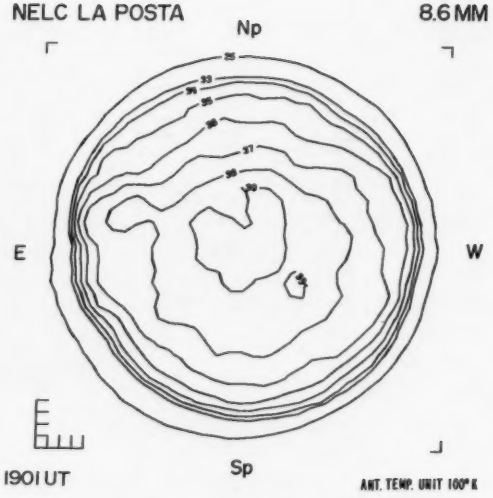
CORONA
NO DATA

NELC LA POSTA



2041 UT

NELC LA POSTA



1901 UT

DECEMBER 20, 1974 (P = 8.08, B_o = -1.54, L_o = 84.25)

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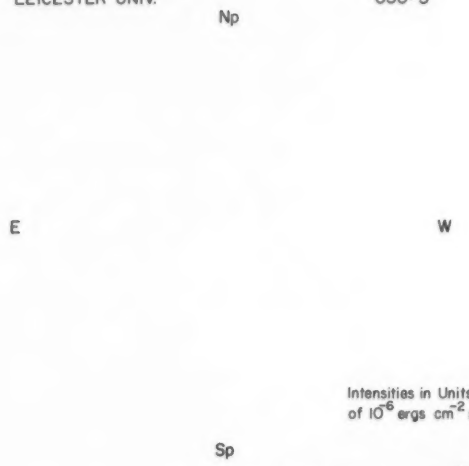
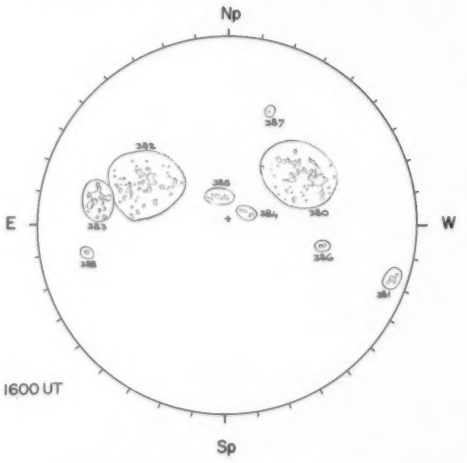
X-RAY
OSO-5



Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HULBERT

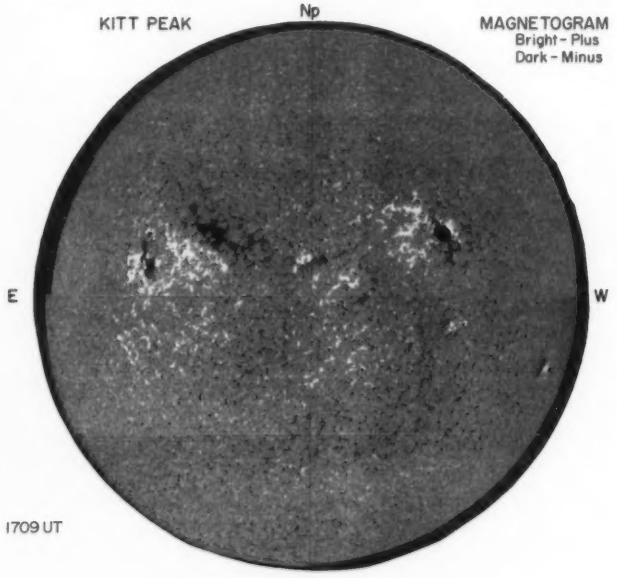


1600 UT

CALCIUM REPORT

FAIR	M
80 - 1400	- 2.5
81 - 0500	- 3.0
82 - 1400	- 2.5
83 - 1300	- 3.0
85 - 0200	- 2.5

KITT PEAK

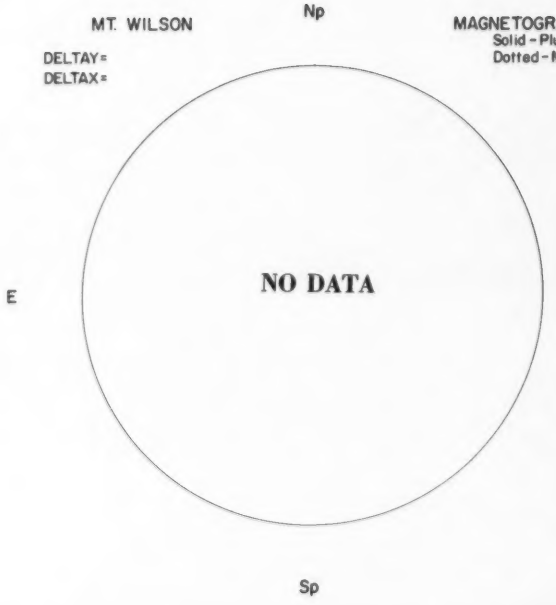


1709 UT

MAGNETOGRAM
Bright - Plus
Dark - Minus

MT. WILSON

DELTAY =
DELTAX =



MAGNETOGRAM
Solid - Plus
Dotted - Minus

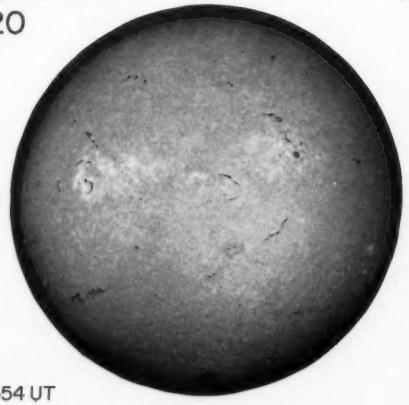
Levels
± 5
± 10
± 20
± 40
± 80

RAMEY AFB

20

Np

Hα



E

W

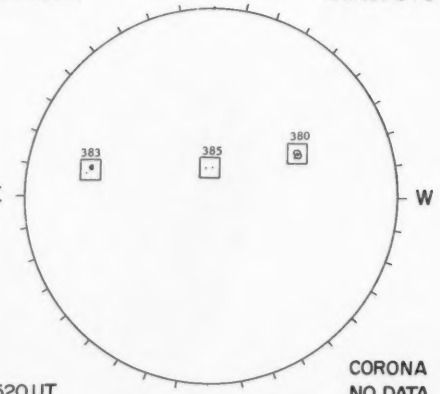
1554 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

1520 UT

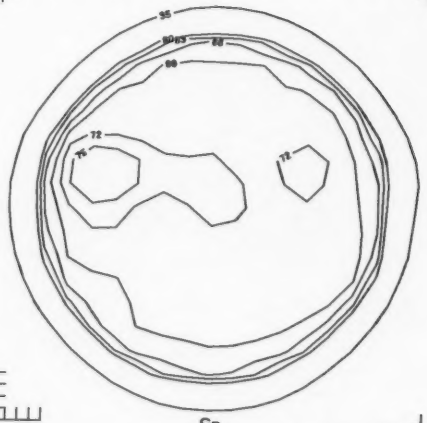
Sp

CORONA
NO DATA

NELC LA POSTA

2.0 CM

Np



E

W

1933 UT

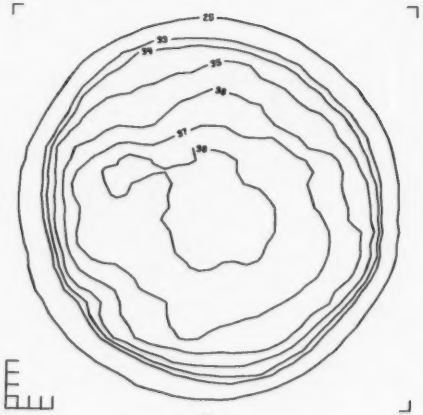
Sp

ANT. TEMP. UNIT 100°K

NELC LA POSTA

8.6 MM

Np



E

W

1754 UT

Sp

ANT. TEMP. UNIT 100°K

63
Dec 74

DECEMBER 21, 1974 (P=7.61, B_o=-1.67, L_o=71.08)

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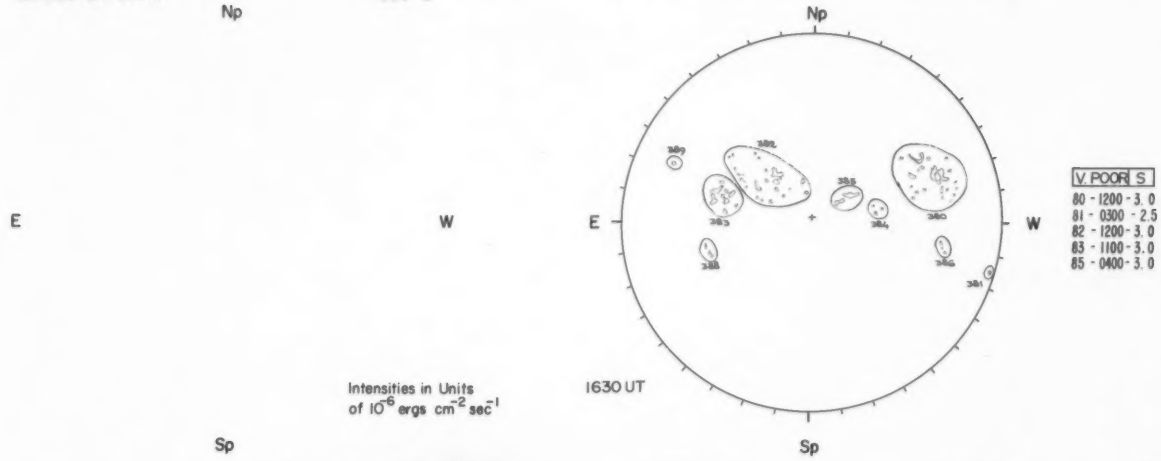
X-RAY
OSO-5

McMATH-HULBERT

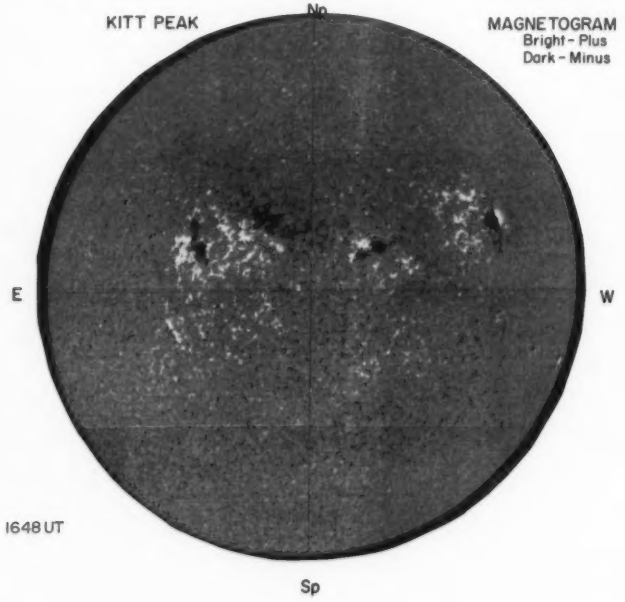
CALCIUM REPORT



Intensities in Units of 10^{-6} ergs cm^{-2} sec^{-1}

KITT PEAK

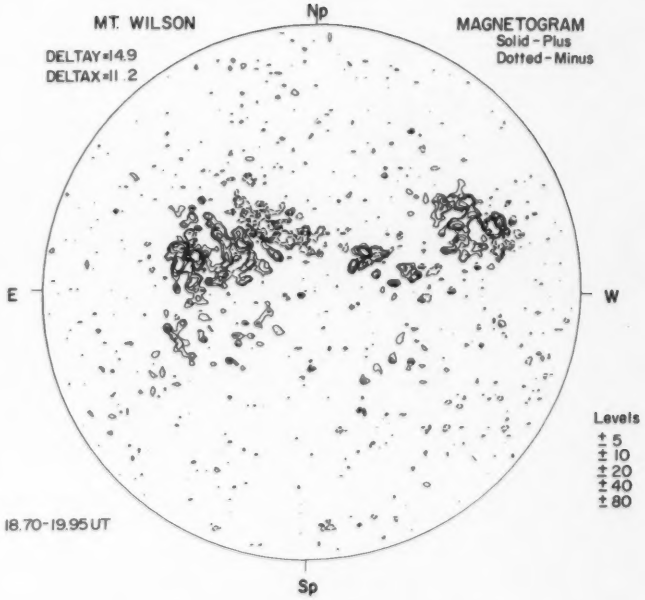
MAGNETOGRAM
Bright - Plus
Dark - Minus

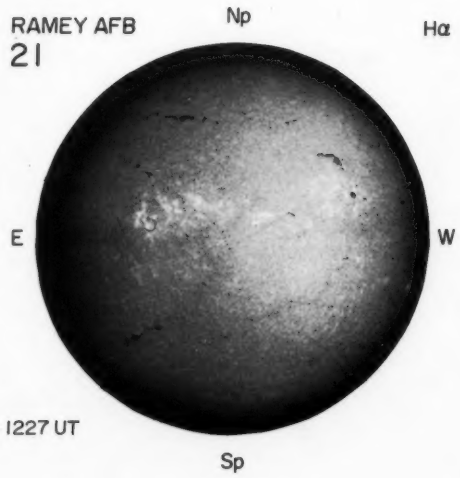


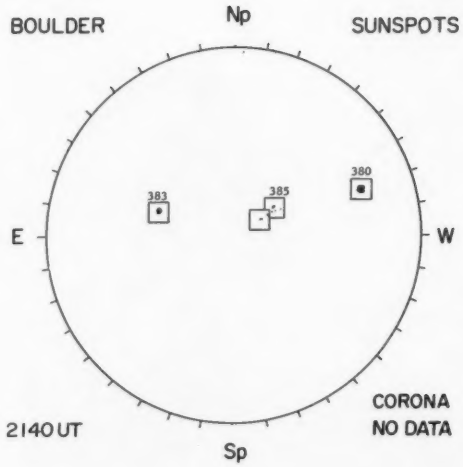
MT. WILSON

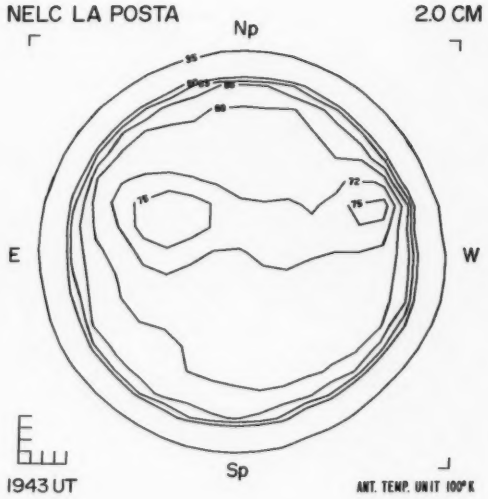
DELTAY=14.9
DELTAX=11.2

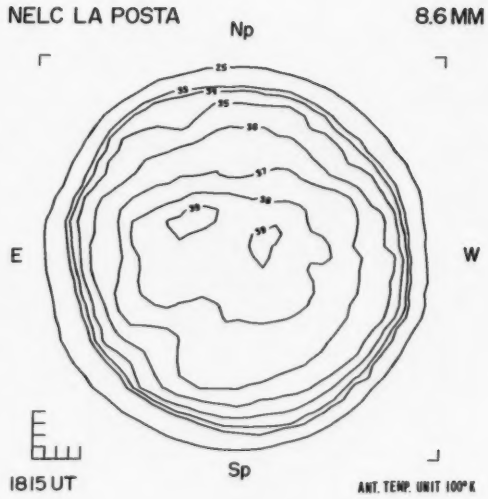
MAGNETOGRAM
Solid - Plus
Dotted - Minus




RAMEY AFB
21
Np
Hα
E
W
1227 UT
Sp


BOULDER
Np
SUNSPOTS
383
385
380
E
W
2140 UT
Sp
CORONA
NO DATA


NELC LA POSTA
2.0 CM
Np
E
W
Sp
1943 UT
ANT. TEMP. UNIT 100°K


NELC LA POSTA
8.6 MM
Np
E
W
Sp
1815 UT
ANT. TEMP. UNIT 100°K

DECEMBER 22, 1974 (P=7.14, B_o=-1.79, L_o=57.90)

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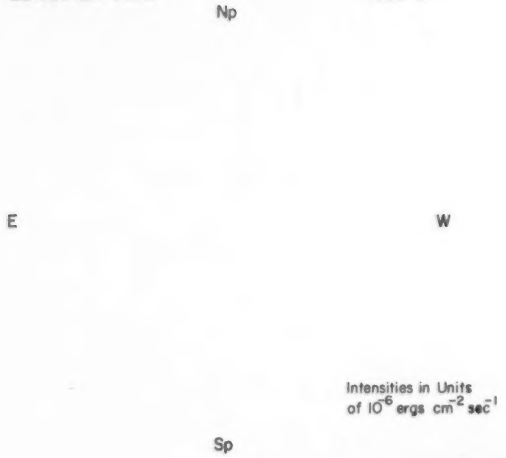
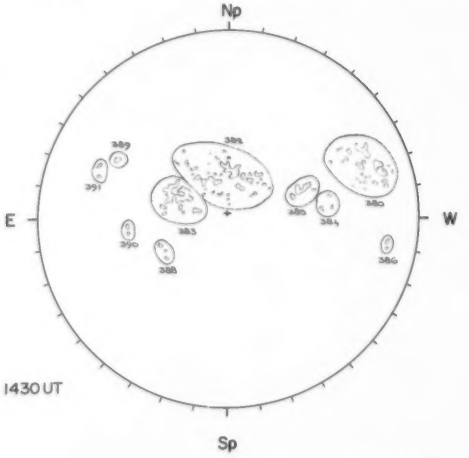
X-RAY
OSO-5



Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HULBERT

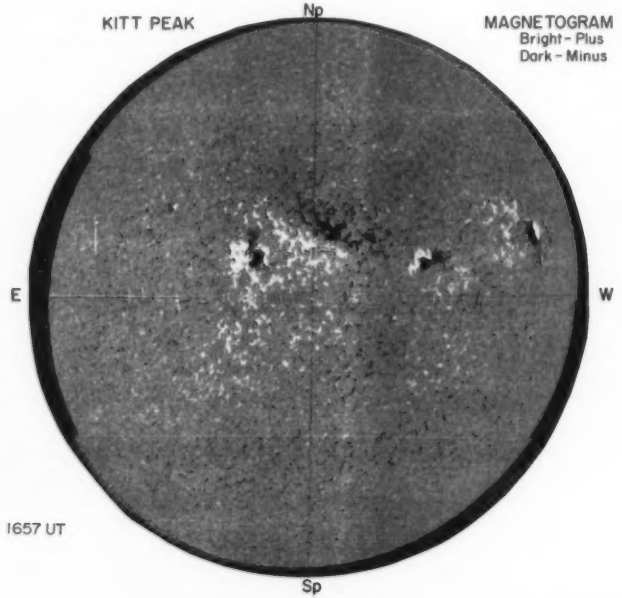


1430 UT

CALCIUM REPORT

POOR	D
82 - 1700	- 3.0
83 - 1400	- 3.0
85 - 0500	- 3.5

KITT PEAK

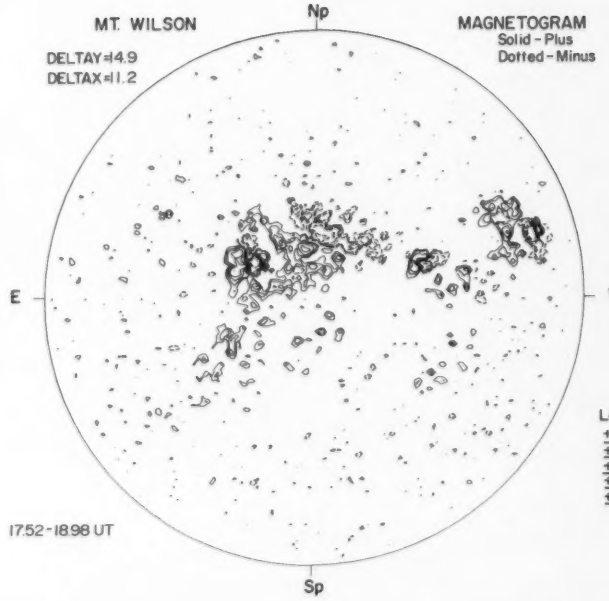


MAGNETOGRAM
Bright - Plus
Dark - Minus

1657 UT

MT. WILSON

DELTAY=14.9
DELTAX=11.2

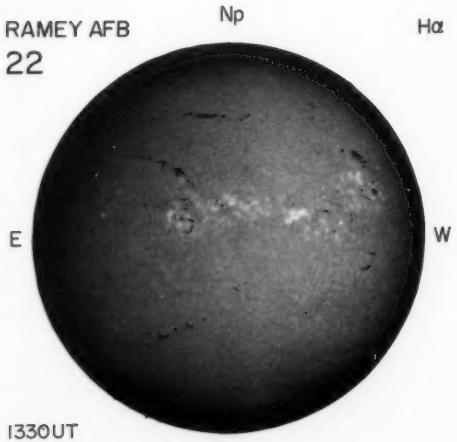


MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
±5
±10
±20
±40
±80

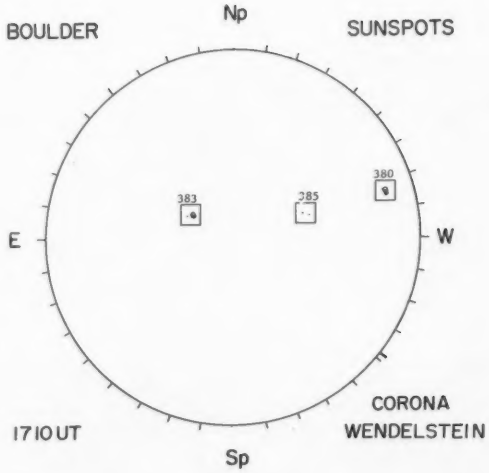
17.52 - 18.98 UT

RAMEY AFB
22



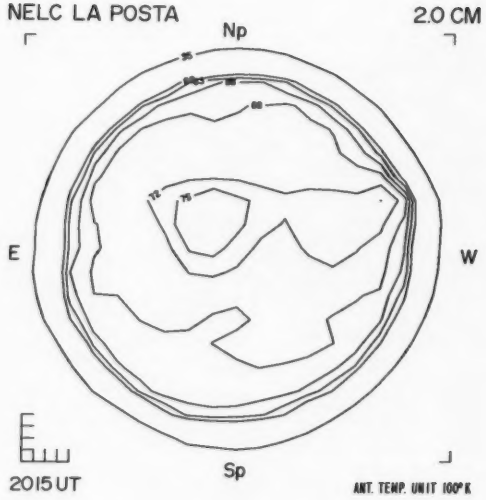
1330UT

BOULDER



1710UT

NELC LA POSTA



2015UT

NELC LA POSTA

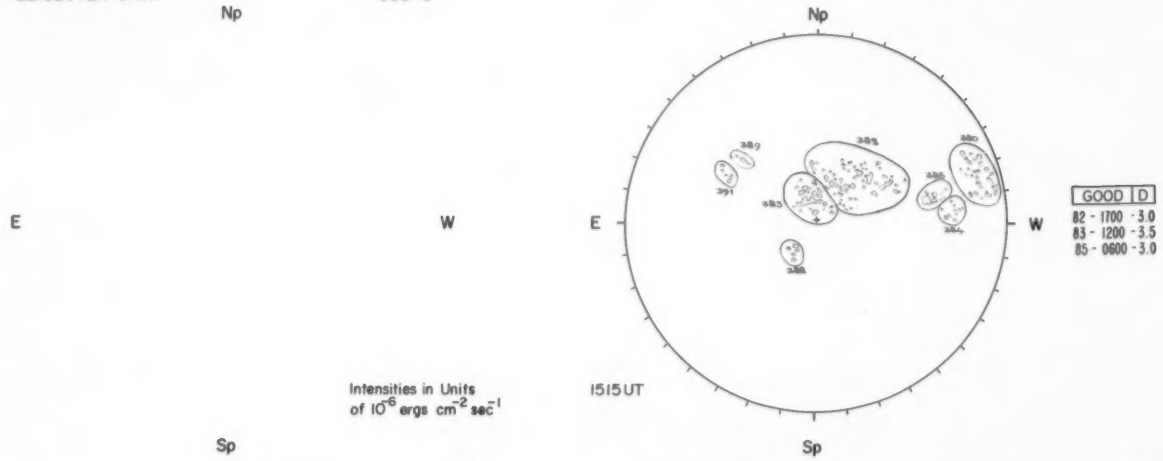
DECEMBER 23, 1974 (P=6.66, B_o=-1.91, L_o=44.73)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULBERT

CALCIUM REPORT



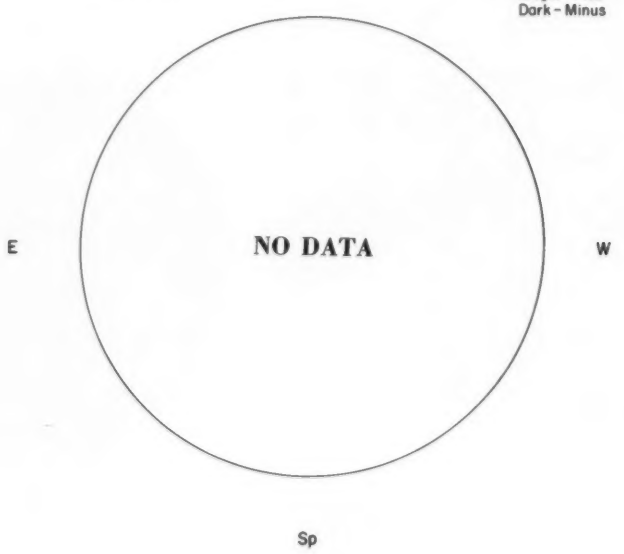
GOOD	D
82 - 1700	- 3.0
83 - 1200	- 3.5
85 - 0600	- 3.0

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1515 UT

KITT PEAK

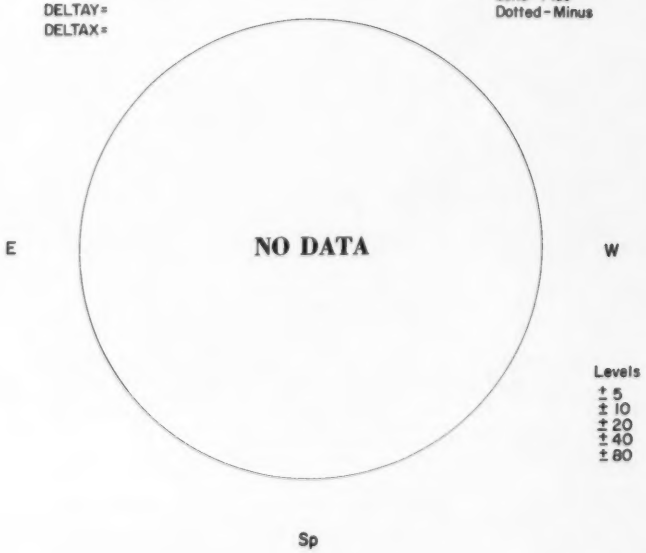
MAGNETOGRAM
Bright - Plus
Dark - Minus



MT. WILSON

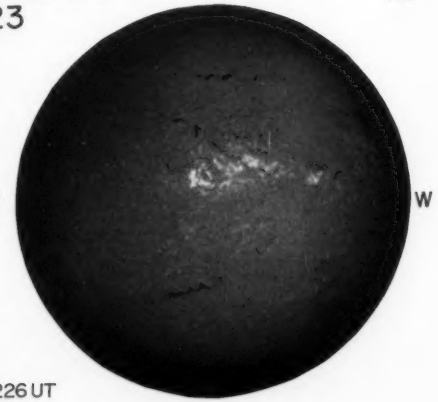
DELTAY=
DELTAX=

MAGNETOGRAM
Solid - Plus
Dotted - Minus



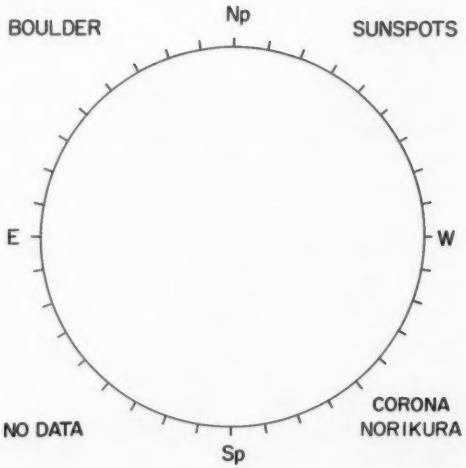
Levels
± 5
± 10
± 20
± 40
± 80

RAMEY AFB
23



1226 UT

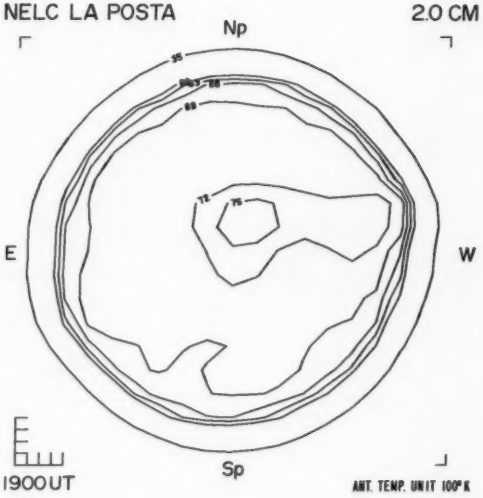
BOULDER



NO DATA

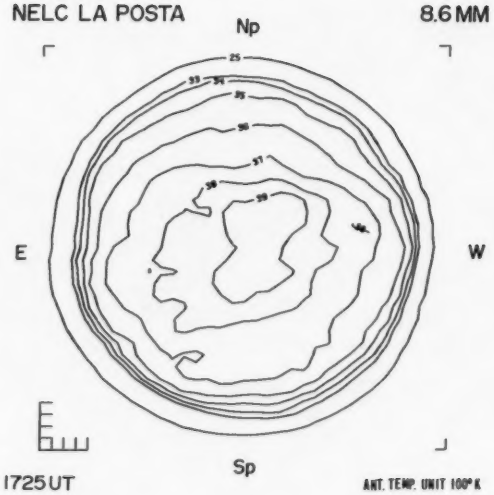
CORONA
NORIKURA

NELC LA POSTA



1900 UT

NELC LA POSTA



1725 UT

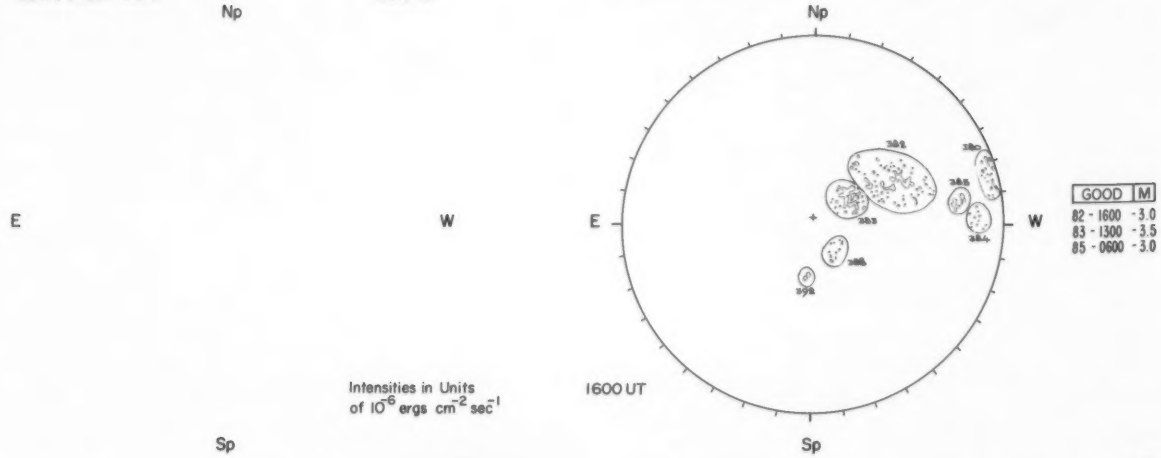
DECEMBER 24, 1974 (P=6.19, B_o=-2.04, L_o=31.56)

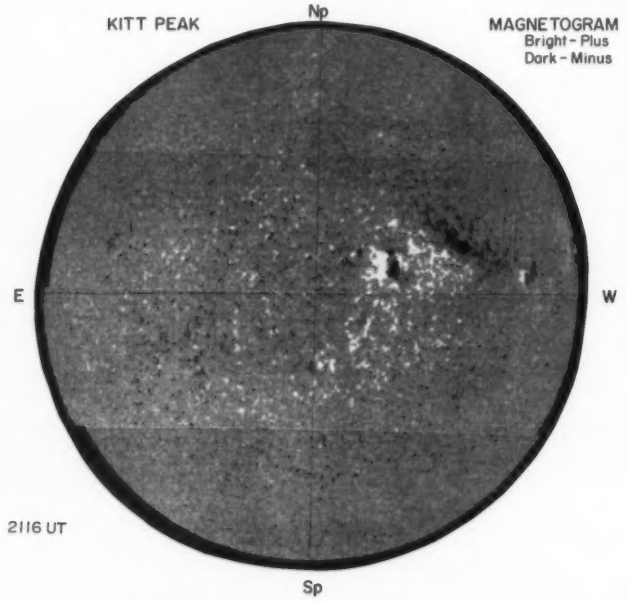
UNIV. COLLEGE LONDON
LEICESTER UNIV.

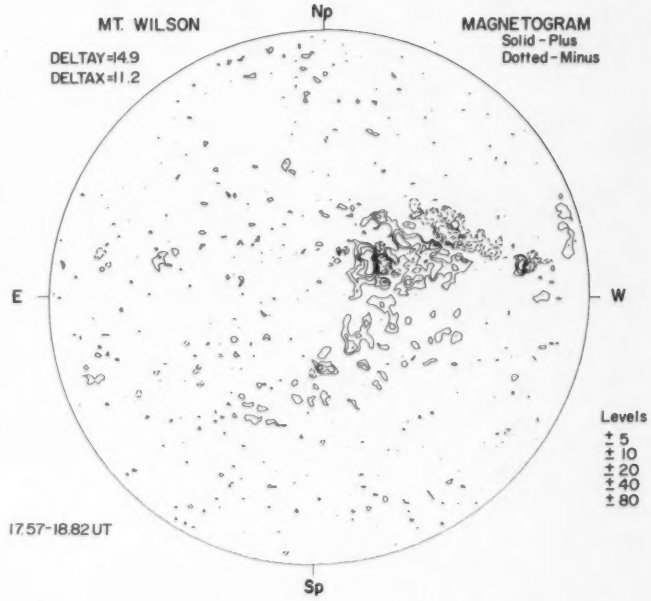
X-RAY
OSO-5

McMATH-HULBERT

CALCIUM REPORT

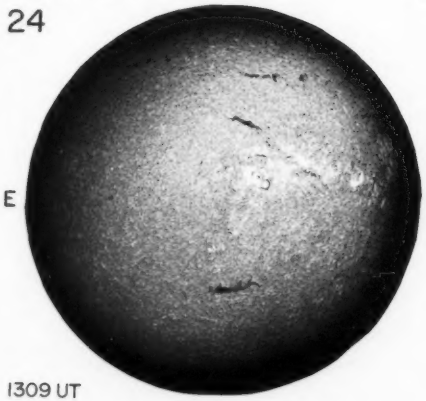






RAMEY AFB Np Hα

24

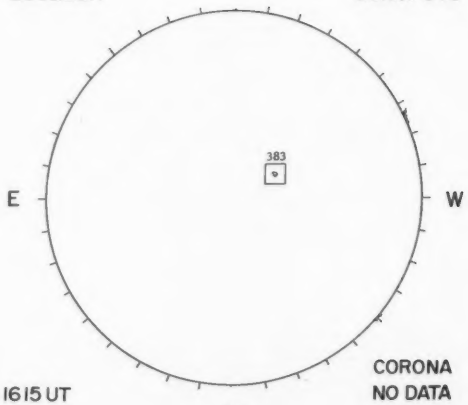


E W

1309 UT

Sp

BOULDER Np SUNSPOTS



E W

1615 UT

Sp

CORONA
NO DATA

NELC LA POSTA Np 2.0 CM

NO DATA

E WEATHER W

Sp

ANT. TEMP. UNIT 100°K

NELC LA POSTA Np 8.6 MM

NO DATA

E WEATHER W

Sp

ANT. TEMP. UNIT 100°K

71
Dec 74

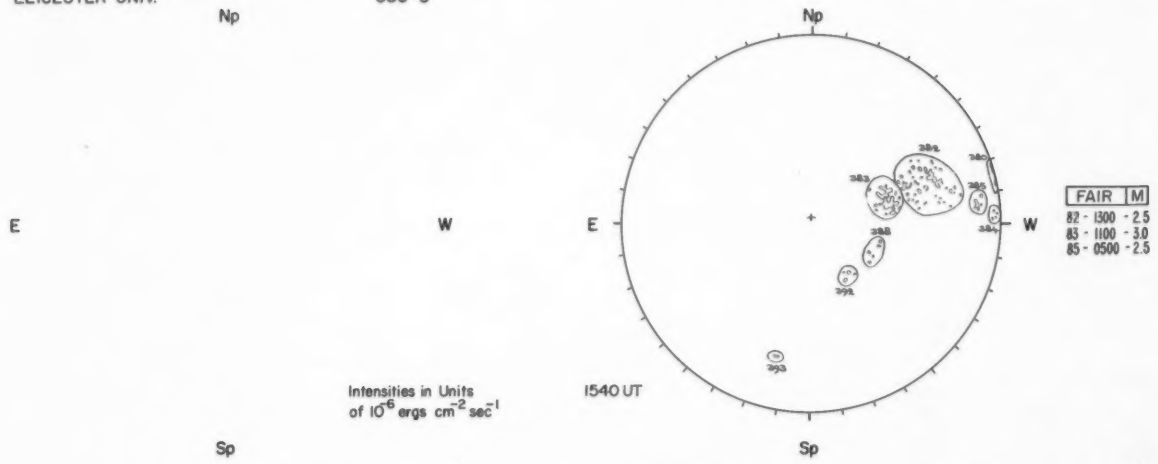
DECEMBER 25, 1974 (P=5.71, B_o=-2.16, L_o=18.38)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULBERT

CALCIUM REPORT

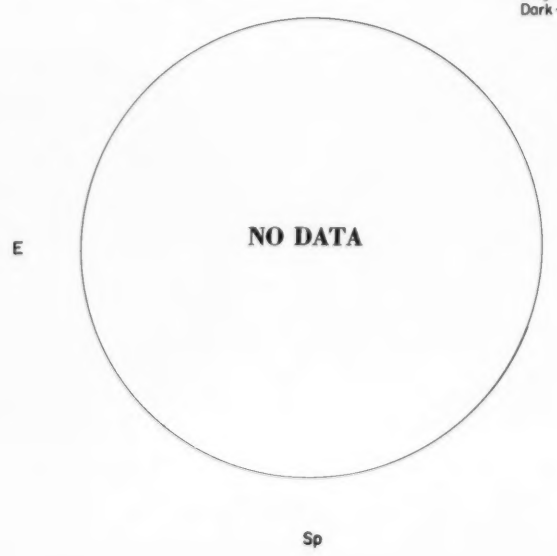


Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1540 UT

KITT PEAK

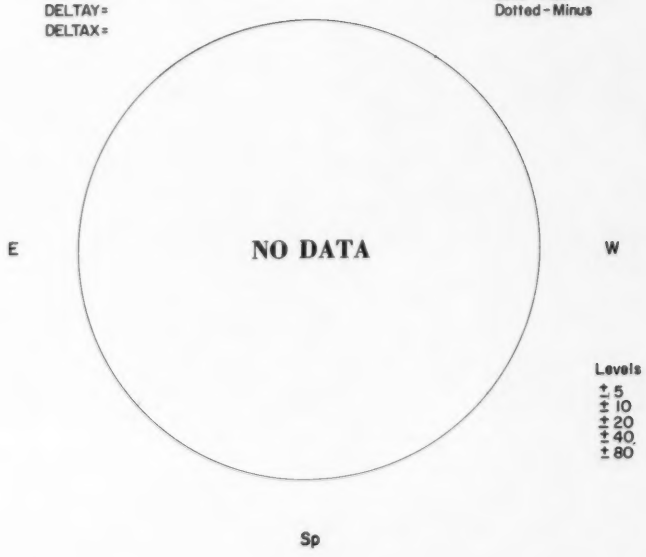
MAGNETOGRAM
Bright - Plus
Dark - Minus



MT. WILSON

DELTAY=
DELTAX=

MAGNETOGRAM
Solid - Plus
Dotted - Minus

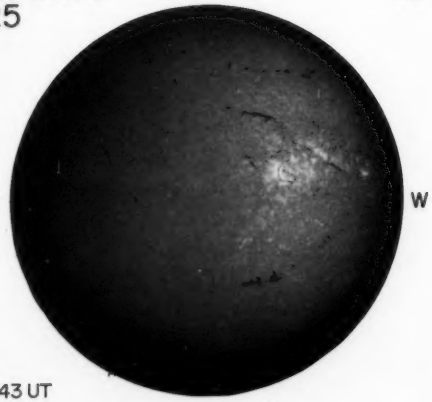


Levels
±5
±10
±20
±40
±80

RAMEY AFB
25

Np

Hα



E

W

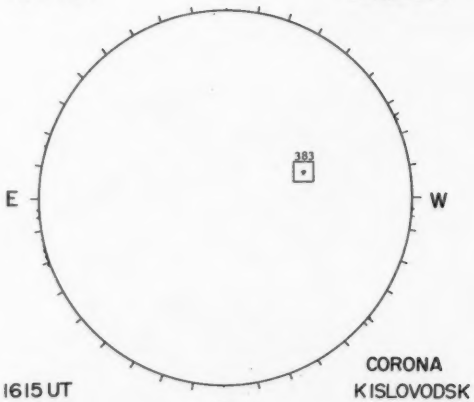
1243 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

CORONA
KISLOVODSK

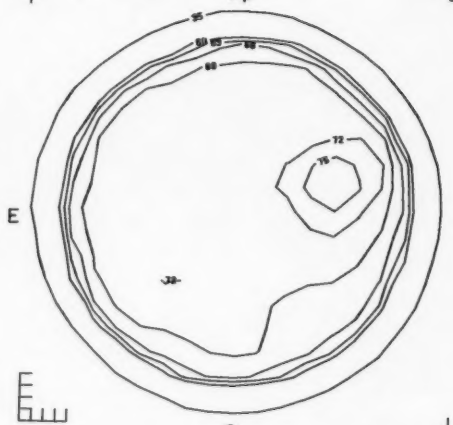
1615 UT

Sp

NELC LA POSTA

2.0 CM

Np



E

W

1855 UT

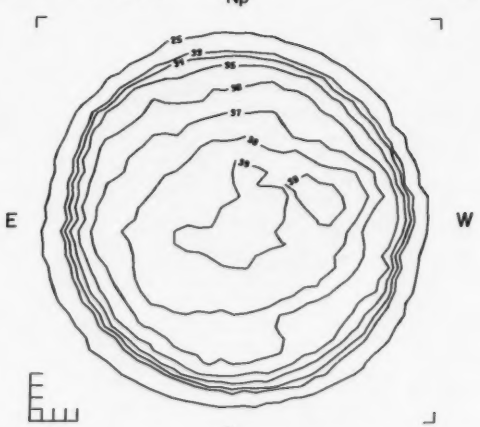
Sp

ANT. TEMP. UNIT 100°K

NELC LA POSTA

8.6 MM

Np



E

W

1726 UT

Sp

ANT. TEMP. UNIT 100°K

73
Dec 74

DECEMBER 26, 1974 (P = 5.23, B_o = -2.28, L_o = 5.21)

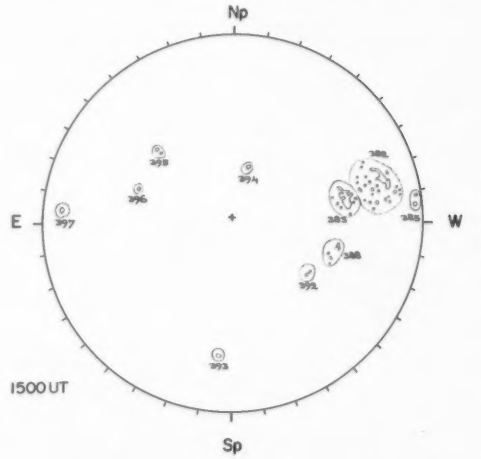
74
Dec 74

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HULBERT

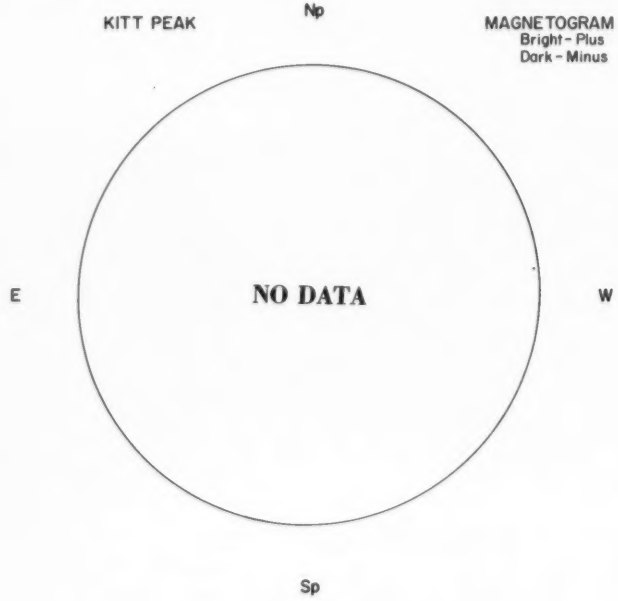


1500 UT

CALCIUM REPORT

FAIR	M
82 - 1200	- 2.5
83 - 0900	- 3.0

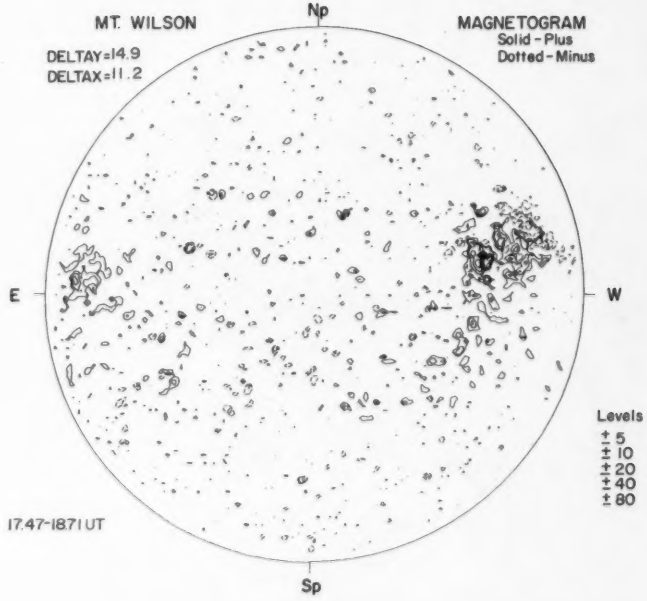
KITT PEAK



MAGNETOGRAM
Bright - Plus
Dark - Minus

MT. WILSON

DELTAY=14.9
DELTAX=11.2



MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

17.47-1871 UT

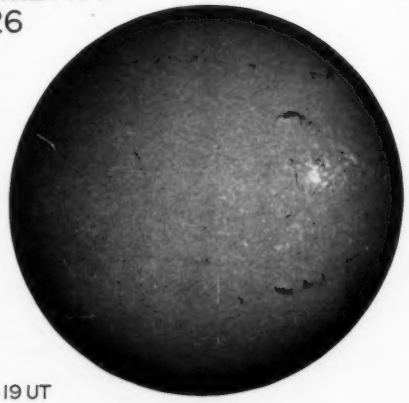
RAMEY AFB
26

Np

Hα

E

W



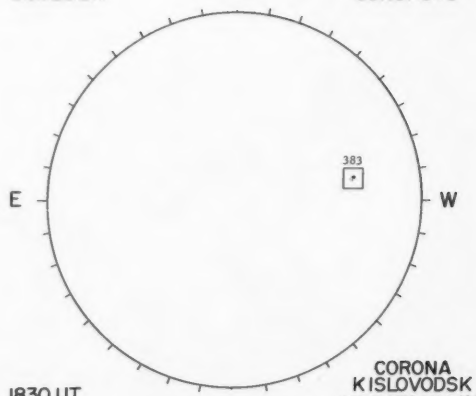
12 19 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

1830 UT

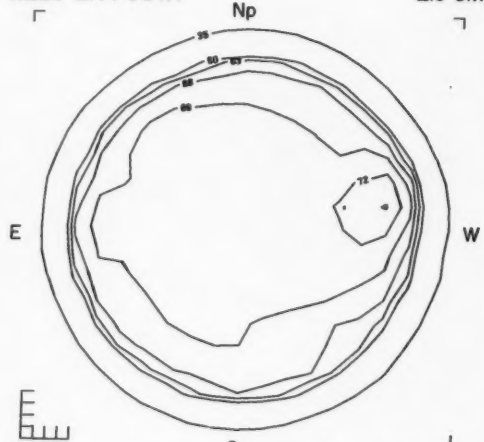
Sp

CORONA
KISLOVODSK
NO DATA W. LIMB

NELC LA POSTA

2.0 CM

Np



E

W

1756 UT

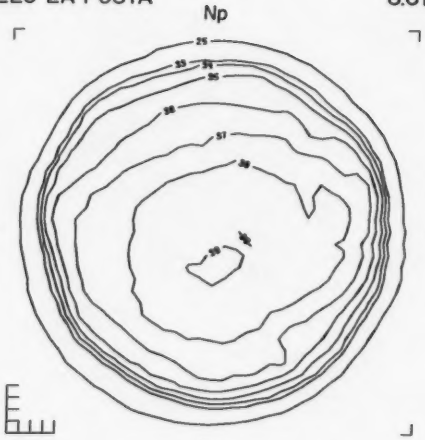
Sp

ANT. TEMP. UNIT 100°K

NELC LA POSTA

8.6 MM

Np



E

W

1852 UT

Sp

ANT. TEMP. UNIT 100°K

75
Dec 74

DECEMBER 27, 1974 (P = 4.75, B_o = -2.41, L_o = 352.04)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

Np

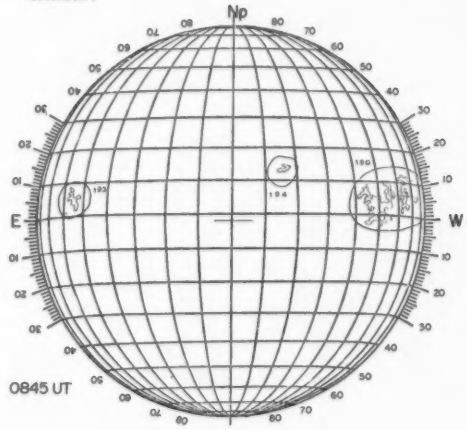
E W

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

Sp

CATANIA

CALCIUM REPORT



FAIR SS
90 - 5724 ---
94 - 0215 ---

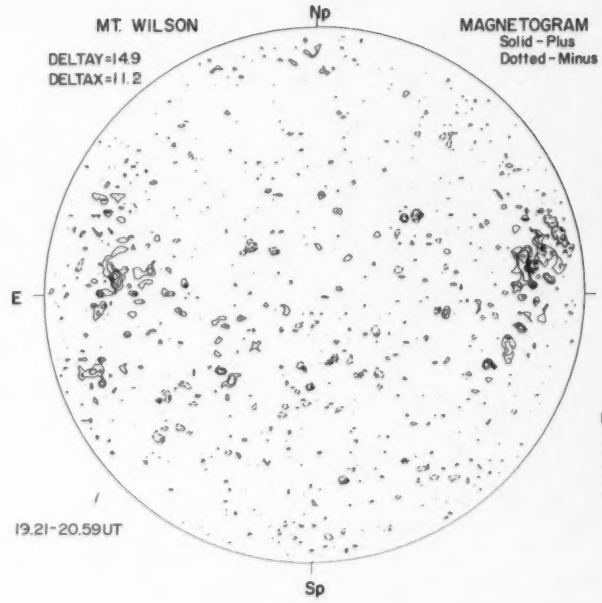
0845 UT

KITT PEAK

MAGNETOGRAM
Bright - Plus
Dark - Minus

MT. WILSON

DELTAY=14.9
DELTAX=11.2



MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

19.21-20.59UT

RAMEY AFB

27

Np

Hα

E

W

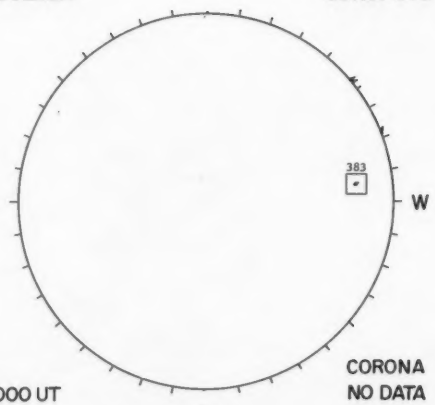
1216 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

2000 UT

Sp

CORONA

NO DATA

NELC LA POSTA

Np

2.0 CM

NO DATA

E

EQUIPMENT

W

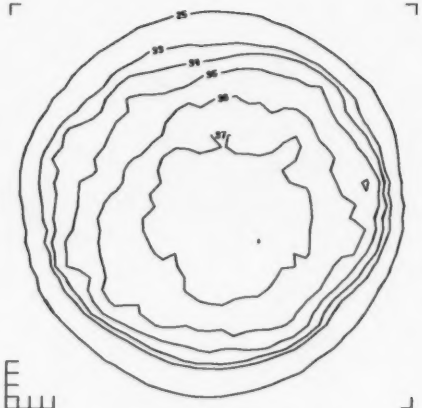
Sp

ANT. TEMP. UNIT 100°K

NELC LA POSTA

Np

8.6 MM



E

W

2126 UT

Sp

ANT. TEMP. UNIT 100°K

77 Dec 74

DECEMBER 28, 1974 (P=4.26, B_o=-2.53, L_o=338.87)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

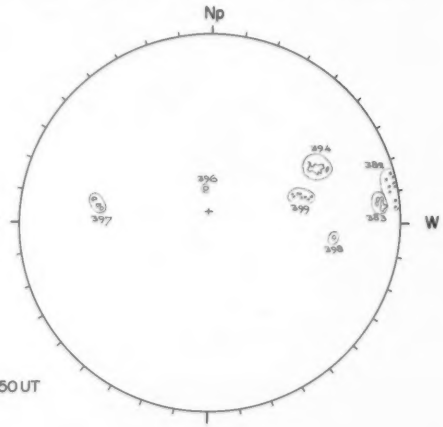
Np

E W

Sp

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

McMATH-HULBERT

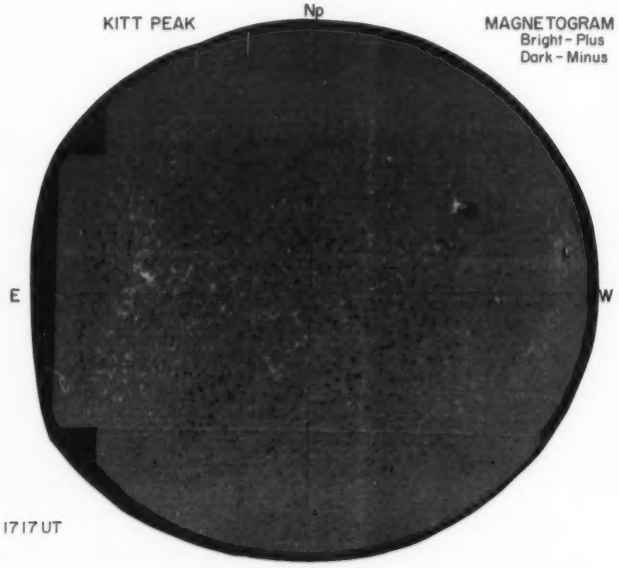


1450 UT

GOOD	M
83 - 0700 - 3.0	
94 - 0700 - 3.5	

CALCIUM REPORT

KITT PEAK



1717 UT

MAGNETOGRAM
Bright - Plus
Dark - Minus

MT. WILSON

DELTAY=
DELTAX=

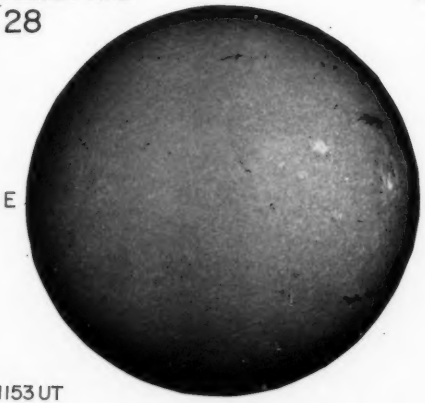
MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
±5
±10
±20
±40
±80

RAMEY AFB
28

Np

Hα



E

W

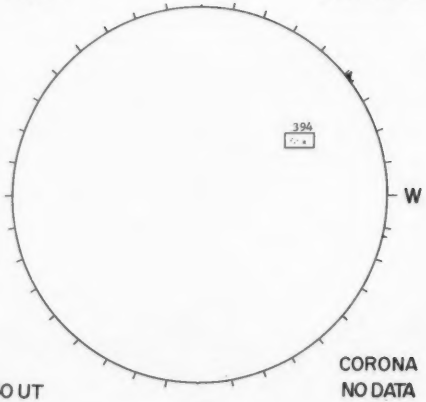
1153 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

CORONA
NO DATA

1530 UT

Sp

NELC LA POSTA

Np

2.0 CM

NO DATA

E

WEATHER

W

Sp

ANT. TEMP. UNIT 100°K

NELC LA POSTA

Np

8.6 MM

NO DATA

E

WEATHER

W

Sp

ANT. TEMP. UNIT 100°K

79
Dec 74

DECEMBER 29, 1974 (P = 3.78, B_o = -2.65, L_o = 325.70)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

Np

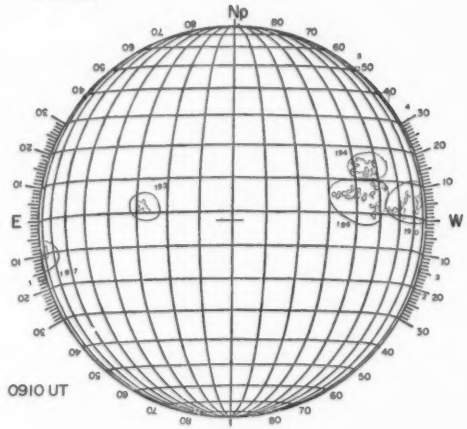
E W

Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

Sp

CATANIA

CALCIUM REPORT



FAIR SS
90 - 2295 - - -
94 - 1156 - - -
97 - 1268 - - -

0910 UT

KITT PEAK

Np

MAGNETOGRAM
Bright - Plus
Dark - Minus

E NO DATA W

Sp

MT. WILSON

Np

DELTAY=
DELTAX=

MAGNETOGRAM
Solid - Plus
Dotted - Minus

E NO DATA W

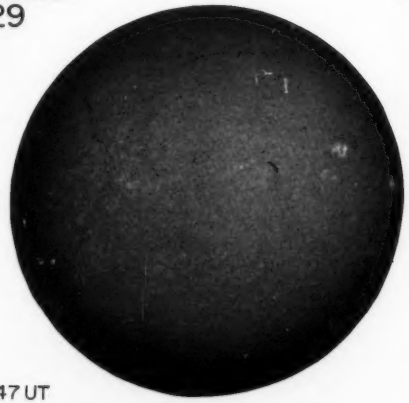
Sp

Levels
± 5
± 10
± 20
± 40
± 80

BOULDER
29

Np

Hα



E

W

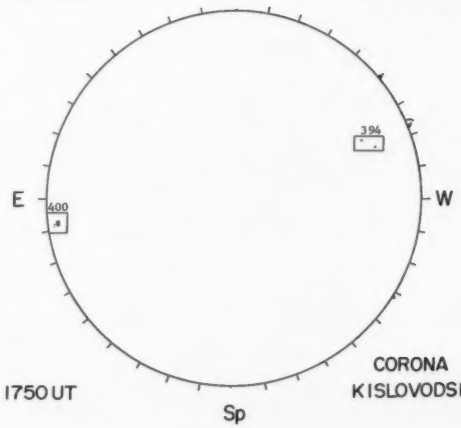
1147 UT

Sp

BOULDER

Np

SUNSPOTS



E

W

1750 UT

Sp

CORONA
KISLOVODSK

NELC LA POSTA

Np

2.0 CM

NO DATA

E

CALIBRATION

W

1921 UT

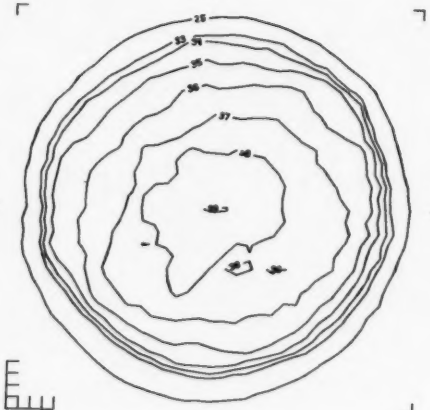
Sp

ANT. TEMP. UNIT 100°K

NELC LA POSTA

Np

8.6 MM



E

W

2021 UT

Sp

ANT. TEMP. UNIT 100°K

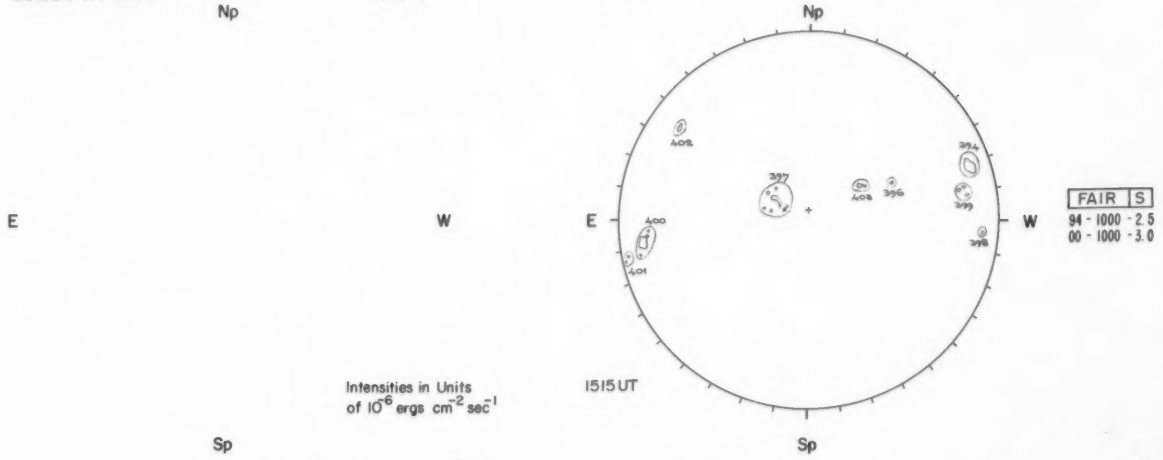
DECEMBER 30, 1974 (P = 3.30, B_o = -2.77, L_o = 312.52)

UNIV. COLLEGE LONDON
LEICESTER UNIV.

X-RAY
OSO-5

McMATH-HULBERT

CALCIUM REPORT

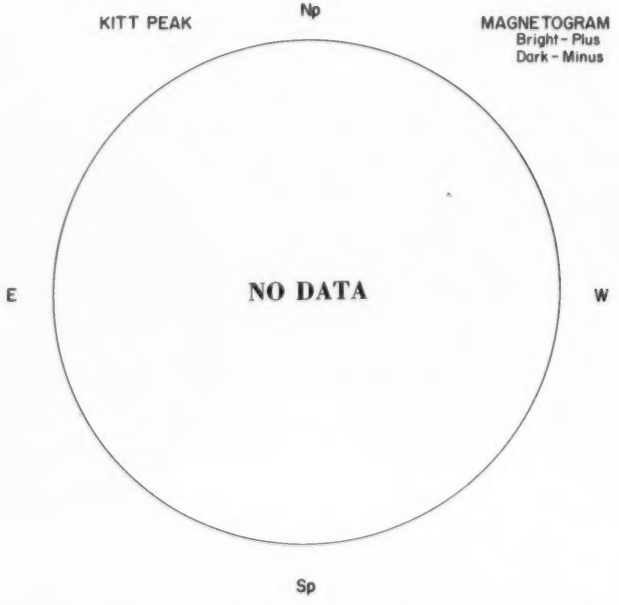


Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

1515 UT

KITT PEAK

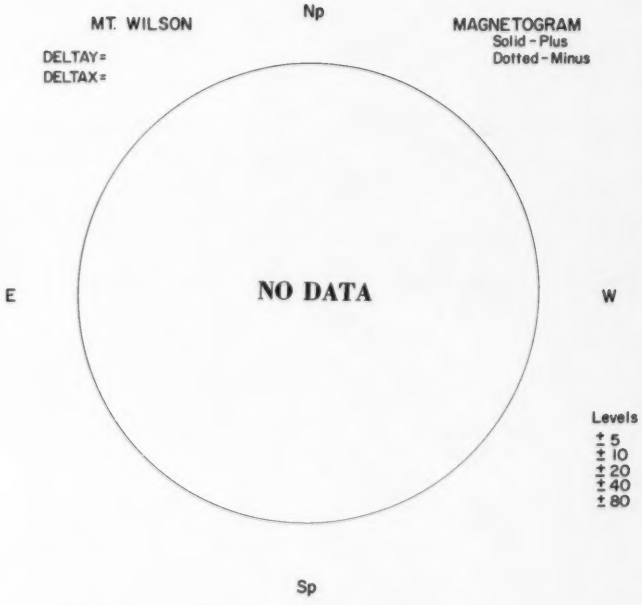
MAGNETOGRAM
Bright - Plus
Dark - Minus



MT. WILSON

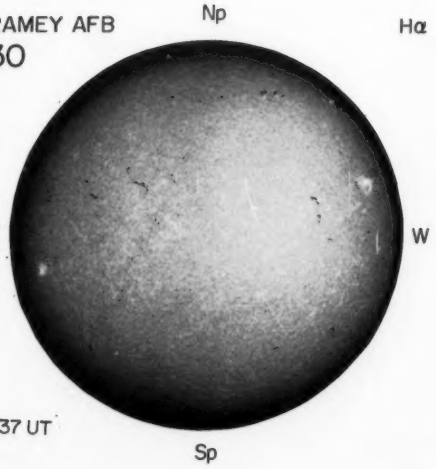
DELTAY=
DELTAX=

MAGNETOGRAM
Solid - Plus
Dotted - Minus

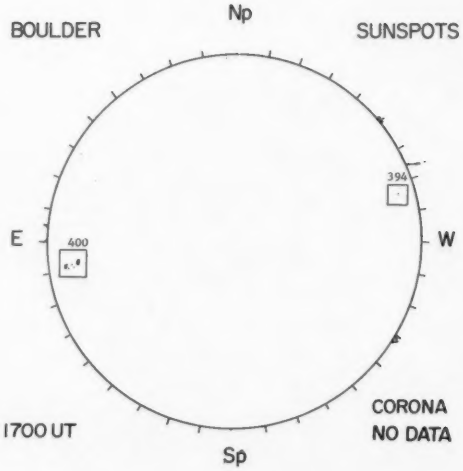


Levels
± 5
± 10
± 20
± 40
± 80

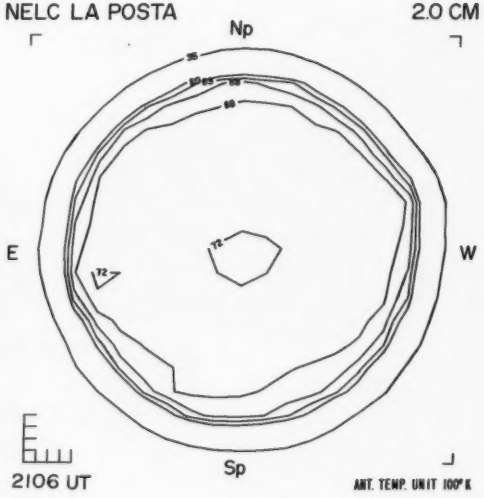
RAMEY AFB
30



BOULDER



NELC LA POSTA



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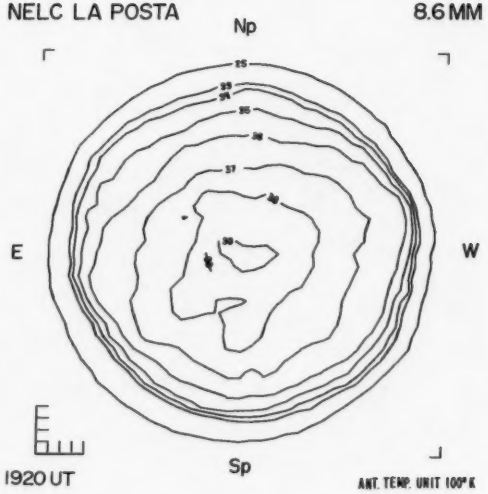

DECEMBER 31, 1974 (P = 2.81, B_o = -2.88, L_o = 299.35)

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OSO-5

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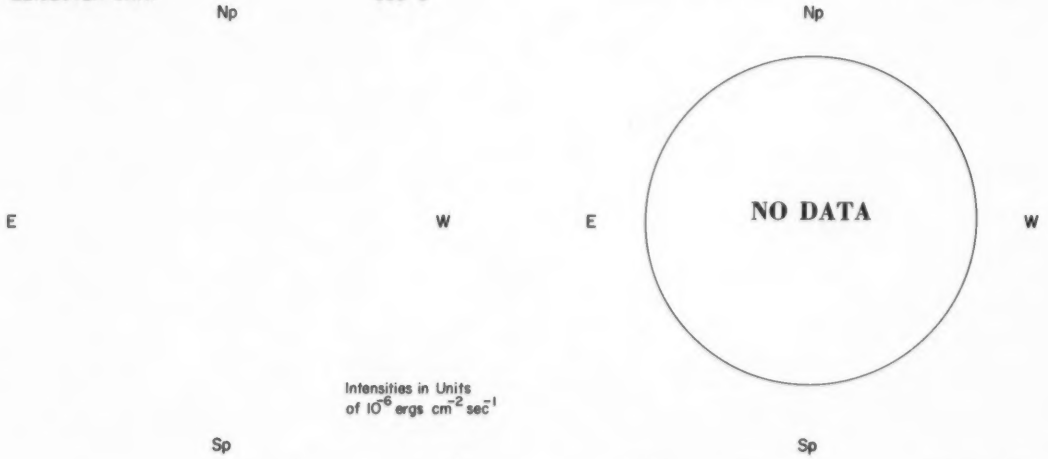
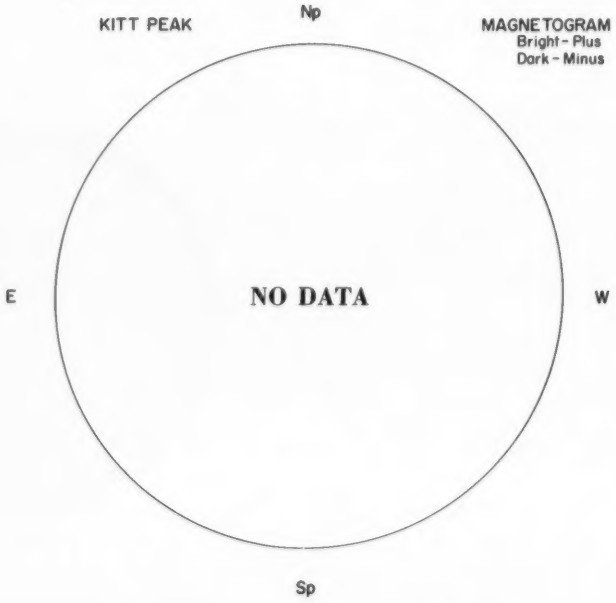
CALCIUM REPORT



Intensities in Units
of 10^{-6} ergs cm^{-2} sec^{-1}

KITT PEAK

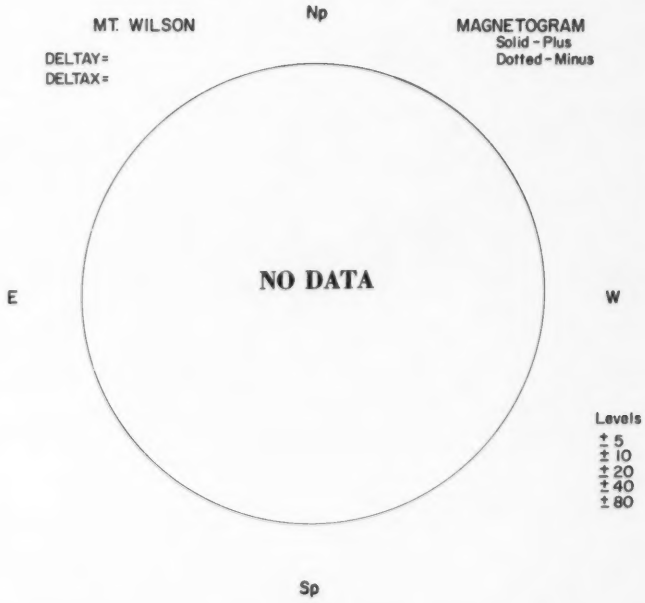
MAGNETOGRAM
Bright - Plus
Dark - Minus



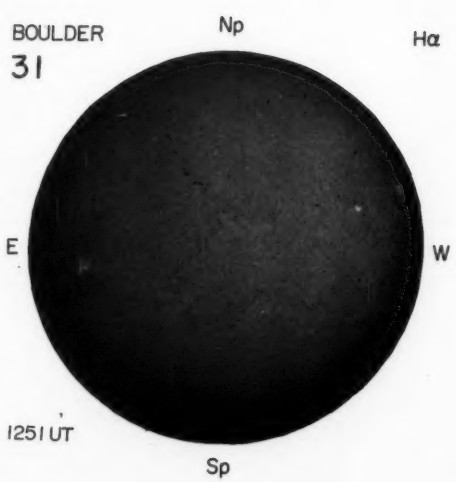
MT. WILSON

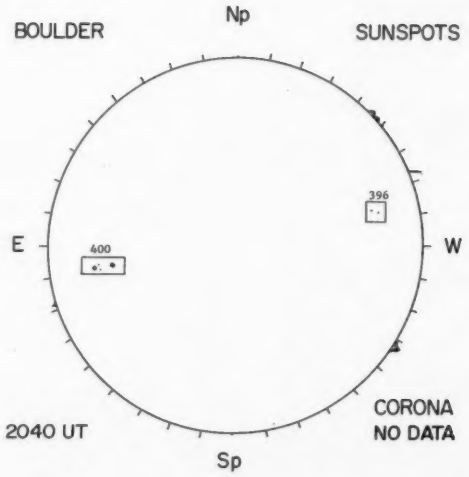
DELTAY=
DELTAX=

MAGNETOGRAM
Solid - Plus
Dotted - Minus



Levels
± 5
± 10
± 20
± 40
± 80


BOULDER
31
Np
Hα
E
W
1251 UT
Sp


BOULDER
Np
SUNSPOTS
396
400
E
W
2040 UT
Sp
CORONA
NO DATA

NELC LA POSTA
Np
2.0 CM
NO DATA
E
WEATHER
W
Sp
ANT. TEMP. UNIT 100°K

NELC LA POSTA
Np
8.6 MM
NO DATA
E
WEATHER
W
Sp
ANT. TEMP. UNIT 100°K

REGIONS OF SOLAR ACTIVITY

DECEMBER 1974

MCMATH REGION 13361 CMP DATE 2.6

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
74	11	28	13361	S20 E55	310	500	1.0							
74	11	29	13361	S20 E40	312	500	1.0							
74	11	30	13361	S20 E25	314	300	1.0							
74	12	2	13361	S21 W02	313	300	1.0							
74	12	3	13361	S21 W23	323	300	1.0							
74	12	4	13361	S21 W35	321	300	1.0							

MCMATH REGION 13370 CMP DATE 2.8

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
74	12	4	13370	N20 W24	310	100	1.0							

MCMATH REGION 13363 CMP DATE 3.9

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
74	12	2	13363	S12 E16	295	100	1.5							
74	12	3	13363	S12 E04	296	100	1.5							

MCMATH REGION 13360 CMP DATE 4.6 RETURN OF REGION 13324 ROTATION 4

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
74	11	28	13360	N05 E77	288	500	1.0							
74	11	29	13360	N07 E65	287	600	2.0							
74	11	30	13360	N08 E52	287	800	1.5							
74	12	2	13360	N08 E27	284	1200	2.0							
74	12	3	13360	N08 E14	286	1200	2.0							
74	12	4	13360	N08 E00	286	1200	2.0							
74	12	6	13360	N08 W26	286	900	2.0							
74	12	9	13360	N08 W65	284	1000	2.0							
74	12	10	13360	N06 W80	286	600	1.5							

MCMATH REGION 13371 CMP DATE 5.4

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
74	12	4	13371	S20 E10	276	300	2.0							
74	12	6	13371	S20 W15	275	200	1.5							

MCMATH REGION 13362 CMP DATE 5.5 RETURN OF REGION 13328* ROTATION 5

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
74	11	29	13362	S13 E68	264	800	2.5							
74	11	30	13362	S13 E68	271	700	3.0							
74	12	2	13362	S13 E37	274	700	2.0							
74	12	3	13362	S13 E25	275	500	1.5							
74	12	4	13362	S13 E12	274	700	1.5							
74	12	6	13362	S14 W13	273	600	1.5							
74	12	9	13362	S14 W53	272	400	1.5							
74	12	10	13362	S15 W68	274	300	1.0							

MCMATH REGION 13366 CMP DATE 6.4

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
74	12	2	13366	N05 E52	259	300	2.0							
74	12	3	13366	N05 E38	262	300	2.0							

(Cont'd)

*An asterisk beside the "Return of Region" number indicates that the new region is only part of the area of the old region.

REGIONS OF SOLAR ACTIVITY

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(Cont'd)

74	12	4	13366	N05 E25	261	300	2.5									
74	12	5						19521	N04 E10	263	(BP)	2	B	10	12	BXO
74	12	6	13366	N05 W03	263	300	2.0	19521	N04 W03	262	BP		B	0	7	BXO
74	12	9	13366	N05 W43	262	300	1.5									
74	12	10	13366	N05 W56	262	200	1.0									
74	12	11	13366	N05 W70	263	200	1.0									

MCMATH REGION 13364 CMP DATE 6.7

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	2	13364	S29 E53	258	100	1.0									

MCMATH REGION 13374 CMP DATE 7.8

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	9	13374	S12 W25	244	100	1.0									

MCMATH REGION 13367 CMP DATE 8.2

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	2	13367	N16 E72	239	100	1.0									

MCMATH REGION 13365 CMP DATE 8.6

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	2	13365	S15 E78	233	100	1.0									

MCMATH REGION 13376 CMP DATE 9.4

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	10	13376	N14 W18	224	200	2.0	19522	N14 W19	224	(AP)	2	B	0	1	AXX
74	12	11	13376	N14 W32	225	100	1.0									
74	12	13						19522	N13 W58	224	(BP)	2	B	10	2	BXO
74	12	14	13376	N14 W72	224	200	1.5									

MCMATH REGION 13375 CMP DATE 9.5

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	9	13375	S34 W02	221	100	1.0									

MCMATH REGION 13378 CMP DATE 11.4

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	14	13378	N09 W45	197	200	1.5									

MCMATH REGION 13372 CMP DATE 11.6

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	6	13372	N13 E66	194	200	1.0									
74	12	9	13372	N13 E26	193	100	1.0									
74	12	10	13372	N13 E11	195	100	1.0									

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DECEMBER 1974

MCMATH REGION 13379 CMP DATE 13.2

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	14	13379	S09 W21	173	100	1.0									

MCMATH REGION 13373 CMP DATE 13.3

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	9	13373	N12 E50	169	200	2.0									
74	12	10	13373	N12 E36	170	400	3.0	19523	N11 E35	170	(B)	2	B	10	13	BXO
74	12	11	13373	N12 E22	171	600	3.0	19523	N10 E21	172	(B)	4	B	30	22	DAI
74	12	12						19523	N10 E06	173	(BP)	5	B	80	12	DSI
74	12	13						19523	N11 W07	173	(BP)	5	B	60	24	DSI
74	12	14	13373	N12 W20	172	1100	3.0	19523	N11 W22	175	(BP)	4	B	30	19	CSI
74	12	15						19523	N12 W34	174	(B)	4	B	40	29	CRI
74	12	16						19523	N12 W46	174	(BF)	4	B	60	16	DSI
74	12	17	13373	N12 W63	174	700	2.0									
74	12	18	13373	N12 W75	175	1000	3.0	19523	N13 W75	172	B		B	20	2	BXO

MCMATH REGION 13377 CMP DATE 15.8

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	11	13377	S04 E53	140	100	1.0									

MCMATH REGION 13381 CMP DATE 15.9

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	17	13381	S15 W26	137	100	1.0									
74	12	18	13381	S15 W37	137	200	3.0	19526	S15 W40	137	BF		B	0	1	AXX
74	12	19						19526	S15 W57		BP		B	20	2	BXO
74	12	20	13381	S15 W65	140	500	3.0	19526	S15 W68	142	BP					
74	12	21	13381	S15 W80	141	300	2.5									

MCMATH REGION 13386 CMP DATE 18.4

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	20	13386	S09 W30	105	100	2.0									
74	12	21	13386	S09 W44	105	200	1.0									
74	12	22	13386	S09 W58	107	200	1.0									

MCMATH REGION 13380 CMP DATE 18.8 RETURN OF REGION 13338 ROTATION 2

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	12						19524	N13 E78	101	(AP)	5	B	160	1	HHX
74	12	13						19524	N13 E65	101	(AP)	5	B	320	1	HHX
74	12	14	13380	N13 E53	99	800	4.5	19524	N13 E50	103	(AP)	6	B	300	1	HHX
74	12	15						19524	N12 E37	103	(AP)	5	B	300	3	CSO
74	12	16						19524	N12 E25	103	(BP)	5	B	330	4	CHO
74	12	17	13380	N14 E13	98	1400	2.5									
74	12	18	13380	N14 E01	99	1800	3.0	19524	N14 W06	103	(AP)	5	B	320	4	CHO
74	12	19						19524	N13 W19		AP		B	300	2	HHX
74	12	20	13380	N14 W25	100	1400	2.5	19524	N13 W30	104	(AP)	5	B	290	1	HHX
74	12	21	13380	N14 W40	101	1200	3.0	19524	N14 W42	104	(AP)	4	B	200	1	HSX
74	12	22	13380	N15 W51	100	1600	2.0	19524	N14 W56	104	(AP)	5	B	260	1	HXX
74	12	23	13380	N15 W62	97	1400	2.0	19524	N14 W69	104	(AP)	4	R	200	1	HHX
74	12	24	13380	N15 W75	97	1400	1.5	19524	N14 W83	104	AP					
74	12	25	13380	N14 W90	99	600	1.0									

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HCMATH REGION 13387 CMP DATE 19.5

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	20	13387	N35 W15	90	100	1.0									

HCMATH REGION 13384 CMP DATE 20.2 RETURN OF REGION 13341 ROTATION 2

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	17	13384	N02 E33	78	200	1.5									
74	12	18	13384	N02 E21	79	100	1.0									
74	12	20	13384	N02 W06	81	100	1.5									
74	12	21	13384	N02 W20	81	200	1.0									
74	12	22	13384	N03 W32	81	200	1.0									
74	12	23	13384	N03 W45	80	300	1.0									
74	12	24	13384	N02 W59	81	300	1.0									
74	12	25	13384	N02 W74	83	300	1.0									

HCMATH REGION 13385 CMP DATE 20.8

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	18	13385	N09 E29	71	200	2.5									
74	12	19						19527	N07 E12		A					
74	12	20	13385	N09 E02	73	200	2.5	19527	N07 E01	73			B	20	2	BXO
74	12	21	13385	N06 W11	72	400	3.0	19527	N08 W12	74	(B)	2	B	20	4	BXO
74	12							19528	N04 W08	70	(BF)	2	B	10	2	BXO
74	12	22	13385	N07 W23	72	500	3.5	19527	N08 W25	73	B					
74	12							19528	N06 W23	71	(BP)	2	B	10	2	BXO
74	12	23	13385	N07 W36	71	600	3.0		N06 W34				R	10	1	AXX
74	12	24	13385	N07 W50	72	600	3.0									
74	12	25	13385	N06 W63	72	500	2.5									
74	12	26	13385	N06 W76	72	400	2.0									

HCMATH REGION 13382 CMP DATE 22.6 RETURN OF REGION 13343 ROTATION 2

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	17	13382	N13 E65	46	900	3.0									
74	12	18	13382	N13 E53	47	1400	2.5									
74	12	20	13382	N13 E27	48	1400	2.5									
74	12	21	13382	N12 E12	49	1200	3.0	19529	N11 E11	51	(AP)	2				
74	12	22	13382	N12 E01	48	1700	3.0	19529	N11 W02	50						
74	12	23	13382	N12 W11	46	1700	3.0									
74	12	24	13382	N12 W24	46	1600	3.0									
74	12	25	13382	N12 W38	47	1300	2.5									
74	12	26	13382	N12 W51	47	1200	2.5									
74	12	28	13382	N12 W78	48	1000	1.5									

HCMATH REGION 13383 CMP DATE 23.8

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	17	13383	N06 E84	27	800	3.0									
74	12	18	13383	N07 E71	29	1200	3.5	19525	N06 E65	32	(BP)	3	B	160	2	DSO
74	12	19						19525	N05 E51		BP					
74	12	20	13383	N07 E44	31	1300	3.0	19525	N05 E40	34	(BP)	5	B	100	2	DSO
74	12	21	13383	N07 E28	33	1100	3.0	19525	N07 E28	34	(AP)	4	B	100	1	HSX
74	12	22	13383	N06 E14	35	1400	3.0	19525	N06 E14	34	(AP)	4	B	90	2	HXX
74	12	23	13383	N06 E02	33	1200	3.5	19525	N06 E00	35	(AP)	3	R	60	3	HSX
74	12	24	13383	N06 W11	33	1300	3.5	19525	N06 W13	34	(AP)	3	B	100	2	HSX
74	12	25	13383	N06 W24	33	1100	3.0	19525	N06 W27	35	AP		R	40	2	HSX
74	12	26	13383	N06 W37	33	900	3.0	19525	N06 W42	36	(AP)	3	B	110	4	CSI
74	12	27						19525	N05 W55	37	(AP)	2	B	50	1	HSX
74	12	28	13383	N05 W64	34	700	3.0									

REGIONS OF SOLAR ACTIVITY

DECEMBER 1974

MCMATH REGION 13388 CMP DATE 24.2 RETURN OF REGION 13348* ROTATION 4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	12	20	13388	S10 E49	26	100	1.0								
74	12	21	13388	S10 E32	29	200	1.0								
74	12	22	13388	S12 E19	30	200	1.5								
74	12	23	13388	S11 E07	28	300	1.5								
74	12	24	13388	S11 W06	28	100	1.0								
74	12	25	13388	S11 W20	29	100	1.0								
74	12	26	13388	S11 W33	29	100	1.0								

MCMATH REGION 13392 CMP DATE 24.7

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	12	24	13392	S18 E01	21	100	2.0								
74	12	25	13392	S18 W12	21	100	1.0								
74	12	26	13392	S18 W25	21	100	1.0								

MCMATH REGION 13390 CMP DATE 25.0

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	12	22	13390	S06 E31	18	200	1.0								

MCMATH REGION 13389 CMP DATE 25.5

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	12	21	13389	N16 E50	11	100	2.0								
74	12	22	13389	N17 E38	11	200	2.0								
74	12	23	13389	N17 E25	10	200	1.5								

MCMATH REGION 13398 CMP DATE 25.6

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	12	28	13398	S06 W40	10	100	1.0								
74	12	30	13398	S05 W68	12	100	1.0								

MCMATH REGION 13391 CMP DATE 26.0

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	12	22	13391	N14 E44	5	200	1.0								
74	12	23	13391	N14 E31	4	200	1.0								

MCMATH REGION 13394 CMP DATE 26.2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT CLASS
74	12	26	13394	N15 W05	1	100	1.5								
74	12	27						19530	N15 W24	6	BP				
74	12	28	13394	N15 W34	4	700	3.5		N12 W33				B	60	9 BRI
74	12	29						19538	N16 W51	7	B		B	30	2 BXO
74	12	30	13394	N15 W61	5	1000	2.5	19530	N16 W65	7	(BP)	2	B	0	1 AXX
75	1	1	13394	N16 W88	3	400	1.0								

REGIONS OF SOLAR ACTIVITY

DECEMBER 1974

MCMATH REGION 13399 CMP DATE 26.4

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	28	13399	N06 W29	359	200	1.0									
74	12	30	13399	N07 W55	359	200	1.0									

MCMATH REGION 13393 CMP DATE 26.9

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	25	13393	S47 E15	355	100	1.5									
74	12	26	13393	S45 E04	353	100	1.0									

MCMATH REGION 13405 CMP DATE 27.3

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	1	1	13405	S27 W72	347	200	1.5									

MCMATH REGION 13404 CMP DATE 27.9

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
75	1	1	13404	N08 W64	339	400	3.0	19532	N08 W65	340	(B)	3	B	30	3	BXO
75	1	2	13404	N08 W75	338	400	3.0	19532	N08 W75	336	BF)	3	R	100	5	CSO

MCMATH REGION 13395 CMP DATE 28.5

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	26	13395	N20 E29	332	100	1.0									

MCMATH REGION 13396 CMP DATE 28.8

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	26	13396	N09 E30	327	100	1.5									
74	12	28	13396	N09 E02	328	100	1.0									
74	12	30	13396	N09 W26	330	100	1.0									
74	12	31							N08 W45				R	10	1	AXX

MCMATH REGION 13403 CMP DATE 29.3

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	30	13403	N08 W17	321	100	1.0									

MCMATH REGION 13397 CMP DATE 31.3

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	12	26	13397	N03 E64	293	200	1.0									
74	12	28	13397	N03 E37	293	200	1.5									
74	12	30	13397	N03 E09	295	500	2.0									
75	1	1	13397	N04 W18	293	300	1.5									
75	1	2	13397	N08 W29	292	400	1.5									
75	1	4	13397	N03 W57	293	300	1.5									
75	1	5	13397	N03 W69	293	400	1.0									

REGIONS OF SOLAR ACTIVITY

DECEMBER 1974

Note: Region 13397 has formed in the location of old plage 13360 of the previous rotation.
No calcium spectroheliograms were secured at the McMath-Hulbert Observatory on December 1, 5, 7, 8, 12, 13, 15, 16, 19, 27, 29 and 31, 1974
No sunspot observations were made at Mt. Wilson Observatory on December 3, 4, 17, 28 and 31, 1974.

DAILY CALCIUM PLAGE INDEX

DECEMBER 1974

YR	MO	DAY	INDEX	YR	MO	DAY	INDEX	YR	MO	DAY	INDEX
74	12	1	*	74	12	11	1.8	74	12	21	10.8
74	12	2	4.2	74	12	12	*	74	12	22	13.7
74	12	3	3.9	74	12	13	*	74	12	23	12.8
74	12	4	5.1	74	12	14	5.4	74	12	24	10.7
74	12	5	*	74	12	15	*	74	12	25	6.4
74	12	6	3.4	74	12	16	*	74	12	26	4.8
74	12	7	*	74	12	17	5.4	74	12	27	*
74	12	8	*	74	12	18	10.1	74	12	28	3.6
74	12	9	2.0	74	12	19	*	74	12	29	*
74	12	10	1.7	74	12	20	10.3	74	12	30	4.0
								74	12	31	*

* NO OBSERVATIONS

SUDDEN IONOSPHERIC DISTURBANCES

DECEMBER 1974

DAY	UNIVERSAL TIME START	END	MAX	IMP	WIDE SPREAD INDEX	NUMBER OF STATION REPORTS BY TYPE SWF	SCNA	SEA	SPA	LF-SPA	SES	SFD	KNOWN FLARE	McMATH REGION
12	0109	0208	0117	1-	1				1				0106	13373
14	1822	1850	1827	1-	3	1				1	2		1817	13380
16	2322	0000	2331	1-	1				1				2324	13373
17	0151	0215	0158	1-	1				1				0146	13380
19	1130	1210	1140	1-	1				1				1135E	11383
22	1613	1730	1635	1-	1				1		1		1601	13383
25	1915	2037	1934	1-	3	1			3	1	1		1913	13383
27	0020	0104	0034	1-	1				1				0016	13383

PERIODS OF NO OBSERVATIONS:

DATE	TIME (UT) and STATION
01-03	0000-2400 A36
01-07	0000-2400 A28
01	0000-2400 A37
02	2106-2122 TM
03	0000-2400 TN, 1015-1329 UM (16 kHz)
05	1435-1533 UM (16 kHz)
06	1358-1748 UM (17 kHz)
07	1905-1945 BO
08	1018-1702 UM (17 kHz)
10	1005-1323 UM (16 kHz), 2112-2125 TM
13	1358-1751 UM (17 kHz)
15-16	2255-0445 MC
17	1005-1345 UM (16 kHz)
19	0000-2400 TN
20	0000-2400 TN, 1353-1652 UM (17 kHz)
21-30	1400-1945 MC
21	0000-2400 A40, 1407-1500 UM (13 kHz)
22-26	0000-2400 A40
23-31	0000-2400 A36
24	1125-1345 UM (16 kHz)
27	1400-1627 UM (17 kHz)
31	0000-2400 A28, 1005-1327 UM (16 kHz)

STATIONS REPORTING FOR DECEMBER 1974

AAVSO (A1, A26) (SEA) (A1, A19, A21, A28, A29, A30, A31, A32, A35, A36, A37, A40) (SES) (A31) (SWF)
BOULDER (BO) (SCNA, SEA)
DARMSTADT (DA) (SWF)
DEBRE ZEIT (DE) (SPA)
HERSTMONCEUX (HC) (SEA)
HIRAISO (HI) (SWF)
HOBART (TA) (SEA)
HUANCAYO (HU) (SWF)
INUBO (IN) (SPA)
JOHANNESBERG (JH) (SPA)
KULA (KL) (SPA)
MCMATH (MC) (SWF, SCNA)
PANSKA VES (PU) (SWF, SEA, SES)
POITIERS (PO) (SEA)
PRESTON (LO) (SEA)
SAO PAULO (UM) (SES, SPA)
SOFIA (SF) (SES)
ST CLOUD (SC) (SES)
TABLE MOUNTAIN (TM) SPA)
TORINO (TN) (SPA)
TORTOSA (TS) (SEA)
UPICE (UI) (SEA)

SIDS BY McMATH REGION

DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
REGION																															
73												1				1															
80														1				1													
83																			1			1			1		1				
X-RAY																															
UNKNOWN																															
NO FP																															

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

DECEMBER 1974

DEC 1974	TIMES OF OBSERVATION		STATION	EVENTS													SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
01	0000	0023	CULG							0000	0023	1					IIIN
			CULG							0007	0008	1					IIIG
	0039	0721	CULG							0039	0150	1					IIIN
			CULG				0138	0141	1	0138	0142	2	0138.5	0141	2		IIIGG,V
	0000	0913	MANI										0139.9	0141.7	3		IIIG
			CULG							0538	0539	1					IIIB
			CULG							0709	0710	1					IIIG
	0712	1516	DURN														
	0737	0822	WEIS														
	1158	2106	SGMR														
	1401	2334	HARV														
	1400	2330	BOUL										1402.8	1404.2	1		III
			BOUL							1831.9	1832.4	1	1831.9	1832.4	1		III
	2021	2400	CULG							2203		1					IIIB
			BOUL							2203.1	2203.4	1	2203.1	2203.4	1		III
	2204	2400	MANI														
			CULG							2345		1					IIIB
02	0000	0848	MANI														
	0000	0721	CULG							0035.5	0037	1					IIIG,U
			CULG				0604	0605	1	0604	0605.5	2					IIIG,U
			CULG							0607.5	0608.5	1					IIIG
			CULG							0609	0609.5	1					IIIG,RS
			CULG							0615	0615.5	1					IIIG
			CULG							0709		1					IIIB
	0712	1515	DURN														
	0744	1446	WEIS														
	1245	2106	SGMR														
	1400	2330	BOUL														
	1401	2334	HARV														
	2021	2400	CULG														
	2204	2400	MANI														
03	0000	0913	MANI														
	0000	0721	CULG							0246		1					IIIB
			CULG							0330		1					IIIB
			CULG							0521		1					IIIB
	0713	1514	DURN														
	0744	1448	WEIS														
	0854	1355	OWIN														
	1200	2106	SGMR														
	1400	2330	BOUL														
	1401	2334	HARV							1406	1545	1					IN
	2020	2400	CULG														
	2205	2400	MANI														
04	0000	0913	MANI														
	0000	0722	CULG														
	0715	1514	DURN														
	0746	1316	WEIS														
	1201	2105	SGMR										1344.9	1348.9	2		IIIG
	1353	1513	OWIN														
	1400	2000	BOUL														
	1401	2334	HARV														
	2022	2301	CULG														
	2205	2400	MANI														
	2352	2400	CULG														
05	0000	0913	MANI														
	0000	0722	CULG							0410.5		1					IIIB
			CULG							0440.5		1					IIIB
	0715	1514	DURN														
	0803	1446	WEIS														
	1202	2105	SGMR														
	1400	2330	BOUL														
	1401	2335	HARV														
	2022	2400	CULG														
	2206	2400	MANI														
06	0000	0913	MANI														
	0000	0155	CULG														
	0325	0722	CULG														
	0716	1514	DURN														
	0746	1447	WEIS														
	1203	2105	SGMR														
	1400	2330	BOUL														
	1402	2335	HARV														
	2022	2400	CULG														
	2207	2400	MANI														
07	0000	0913	MANI														
	0000	0723	CULG							0138		1					IIIB
			CULG							0416		1					IIIB
	0720	1514	DURN														
	0748	1058	WEIS														
	1204	2105	SGMR														
	1400	2330	BOUL							1949.9	1951.4	2					II
	1401	2335	HARV							1956	1957	2					UNCLF
	2023	2400	CULG														
	2207	2400	MANI														

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

DECEMBER 1974

DEC 1974	TIMES OF OBSERVATION		STATION	EVENTS													SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.		
08	0000	0913	MANI														
	0000	0724	CULG							0425	0426	1					IIIG,W
	0720	1514	DURN														
	1205	2105	SGMR														
	1400	2330	BOUL														
	1401	2335	HARV														
	2024	2400	CULG														
	2208	2400	MANI														
09	0000	0913	MANI														
	0000	0625	CULG														
	0721	1300	DURN														
	0729	1455	WEIS														
	0826	1511	OWIN														
	1400	2330	BOUL														
	1401	2335	HARV														
	1206	2105	SGMR										1804.9	1805.2	1		III
	2030	2400	CULG														
	2208	2400	MANI														
10	0000	0911	MANI														
	0000	0625	CULG							0111							IIIB,W
	0722	1514	DURN														
	0735	1451	WEIS							1140.8	1141.2	2					IIIB
	1207	2105	SGMR														
	1347	1502	OWIN														
	1401	2336	HARV														
	1400	2330	BOUL							1750.3	1751.5	1	1750.3	1751.5	1		III
	2025	2400	CULG														
	2208	2400	MANI														
11	0000	0911	MANI														
	0000	0700	CULG							0016.5		1					IIIB,U
			CULG							0241		1					IIIB
	0723	1514	DURN														
	0742	1242	WEIS														
	1208	2105	SGMR														
	1248	1453	WEIS														
	0950	1351	OWIN							1315	1351	1					IW
	1402	2336	HARV														
	1400	2330	BOUL										1934.9	1939.5	1		IIIG
	2025	2400	CULG														
	2209	2400	MANI														
12	0000	0911	MANI														
	0000	0725	CULG				0136.5	0139.5	1	0136.5	0139.5	1					IIIG
			CULG							0202.5	0203	1					IIIG
			CULG							0358	0406.5	1					IIIG
	0724	1514	DURN														
	0822	1435	OWIN							0822	1435	1					IN,W
	0744	1455	WEIS							1143.7	1144.7	2					IIIG
	1209	2105	SGMR										1245.8	1256.2	1		III
			WEIS							1255.8	1256.1	1					IIIB
			WEIS							1257.2	1257.4	1					IIIB
	1400	2330	BOUL							1504.9	1505.0	1					III
			BOUL							1511.8	1512.6	1	1511.8	1512.6	1		III
	1401	2336	HARV							1512		2	1512		2		U
			SGMR										1512.0	1512.7	2		III
			BOUL							1546.4	1546.8	1	1546.4	1546.8	1		III
			HARV							1703	1704	2	1703	1704	2		IIIG
			BOUL							1703.1	1708.2	1	1703.1	1708.2	1		IIIG
			HARV							1707	1709	2	1707	1708	2		IIIGG,U
			BOUL							2029.8	2034.0	2	2029.8	2034.0	2		IIIG
			HARV							2031	2033	3	2031	2033	3		IIIGG,V
	2025	2400	CULG				2031	2033	2	2029.5	2033	2	2032	2033	1		IIIGG,V
			SGMR										2031.8	2032.5	1		III
			CULG							2035		1					IIIB
			CULG							2113		1					IIIB
			CULG							2119		1					IIIB
			BOUL							2119.1	2119.5	1	2119.1	2119.5	1		III
	2210	2400	MANI														
			BOUL							2242.5	2242.9	1	2242.5	2242.9	1		III
			CULG							2243		1					IIIB
			CULG							2310.5	2314	1					IIIG
			HARV							2313	2314	1					IIIG
			BOUL							2313.0	2313.9	1	2313.0	2313.9	1		III
13	0000	0726	CULG							0027	0027.5	1					IIIG
			CULG							0046	0048	1					IIIG
	0000	0911	MANI										0156.9	0201.8	2		IIIG
			CULG				0201	0202	1	0156.5	0204	2					IIIGG
			CULG							0227.5		1					IIIB
			CULG							0252		1					IIIB
			CULG							0312		1					IIIB
			CULG							0343	0344	1					IIIG
			CULG				0348	0349.5		0348	0349.5						IIIG,W
			CULG							0426		2					IIIB
			MANI										0426.2	0427.7	2		IIIG
			CULG							0427	0427.5	2	0427	0427.5	1		IIIG
			CULG							0433	0434	2	0433	0434	1		IIIG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

DECEMBER 1974

DEC 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
13			MANI										0433.3	0433.6	3	III
	0725	1514	OURN													
	0744	1455	WEIS													
	0822	0952	OWIN													
	1209	2105	SGMR													
	1402	2336	HARV													
	1400	2330	BOUL							1951.4	1952.0	1	1951.4	1952.0	1	III
	2025	2400	CULG							2208	2209	1				IIIG
			BOUL							2208.6	2209.0	1	2208.6	2209.0	1	III
	2210	2400	MANI													
			CULG							2329						IIIB,W
14	0000	0911	MANI													
	0000	0726	CULG							0046	0705					IIIN,W
	0746	1457	WEIS							1019.5	1023.8	3				IIIGG
	0726	1514	OURN				1021.4	1024.6	3	1020.8	1024.6	3				IIIGG,V
	1401	2336	HARV							1641	1643	2	1641	1642	2	IIIGG
	1400	2400	BOUL							1641.7	1642.8	2	1641.7	1642.8	2	IIIG
			BOUL							1817.7	1825.0	2	1817.7	1825.0	2	IIIGG
			HARV							1818	1823	3	1818	1823	3	IIIGG,V
	1210	2105	SGMR										1821.2	1828.0	1	IIIG
	2026	2400	CULG							2103	2400					IIIN,W
			BOUL							2153.8	2159.8	1	2153.8	2159.8	1	IIIG
			CULG							2157.5	2159	1				IIIG
			BOUL							2207.2	2208.0	1	2207.2	2208.0	1	IIIG
	2210	2400	MANI													
			BOUL							2223.5	2223.7	1	2223.5	2223.7	1	III
15	0000	0911	MANI													
	0000	0727	CULG							0000	0648					IIIN,W
			CULG							0025.5		2	0025.5		1	IIIB
	0726	1514	OURN													
	1036	1457	WEIS													
	1419	2337	HARV							1618	1619	3	1618	1619	3	IIIG,V
	1400	2400	BOUL							1618.6	1619.2	2	1618.6	1619.2	2	IIIG
	1211	2106	SGMR										1618.7	1619.0	1	III
			BOUL							1743.3	1749.7	1	1743.3	1749.7	1	IIIGG
	2057	2400	CULG							2054	2400					IIIN,W
			BOUL							2110.4	2110.8	1	2110.4	2110.8	1	III
	2211	2400	MANI													
			BOUL							2225.7	2225.9	1	2225.7	2225.9	1	III
			BOUL							2241.2	2241.3	1	2241.2	2241.3		III
16	0000	0911	MANI													
	0000	0727	CULG							0000	0727					IIIN,W
			CULG							0506.5	0507.5	1				IIIG
			CULG							0713.5	0717	1				IIIGG
	0727	1514	OURN							0727 E	1514 D	1				I,DC,N
			OURN							0900	1100	3				I,DC
	0749	1458	WEIS							0918	1155	2				IS
	1212	2106	SGMR													
	1300	1511	OWIN				1300	1511	1	1300	1511	1				IS
			OWIN				1447.8	1448.7	2	1447.8	1448.7	2				IIIG
			WEIS							1447.8	1448.6	1				IIIG
			OWIN				1453.3	1454.5	2	1453.6	1454.5	2				IIIG
			WEIS							1454.0	1454.5	1				IIIG
	1400	2400	BOUL							1605.9	1606.2	1	1605.9	1606.2	1	III
			BOUL							1744.8	1745.0	1	1744.8	1745.0	1	III
	1418	2337	HARV							1745		2	1745		1	U
			BOUL							1929.5	1930.1	1	1929.5	1930.1	1	III
			BOUL										2000.9	2001.3	1	III
	2028	2400	CULG				2028	2115								IS,W
			CULG							2120	2400	1				IIIN
	2212	2400	MANI													
			HARV							2323	2326	2				IIIGG,U
			CULG				2324	2325	2	2323	2326	2				IIIG,U
			CULG							2333	2335	1				IIIG
17	0000	0728	CULG							0000	0728	1				IIIN
	0000	0911	MANI													
			CULG							0017.5	0019.5	1				IIIG
			CULG				0026	0728	1	0400	0728	1				IS,CHAINS
			CULG							0212	0213	1				IIIG,U
			CULG							0323	0325	1				IIIG,U
			CULG							0417	0419	1				IIIG
			CULG							0458	0459	1				IIIG
			CULG							0511	0512	1				IIIG
	0729	1514	OURN							0729 E	1514	1				I,N
	0749	1500	WEIS							0927.6	0929.6	1				IIIG
			OURN							0928.3	0929.6	1				IIIG
			OURN							1036.7	1037.0	3				IIIG
			WEIS							1036.7	1037.2	2				IIIG
	1212	2106	SGMR													
			WEIS							1330	1345	1				IS
	1418	2337	HARV							1550	1757	1	1550	1757	1	IIIN
	1400	2400	BOUL										1634.3	2320	1	CONT
			HARV							1923	2035	2	1923	2035	2	IIIN
			CULG				2028	2045	1							IS
	2028	2400	CULG							2028	2400	1				IIIS
	2212	2400	MANI													

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

DECEMBER 1974

DEC 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
17			HARV							2319	2322	2				IIIGG
			CULG							2340.5	2342.5	2				IIIG,V,U
			HARV							2341	2342	1				IIIG
18	0000	0728	CULG							0000	0728					IIIS,W
	0000	0911	MANI													
			CULG							0555	0556	1				IIIG
	0731	1514	OURN							0731 E	1514 D	1				I,N
	0750	0835	WEIS													
	0839	1501	WEIS							1046.5	1047.1	2				IIIG
			WEIS							1153.6	1153.9	1				IIIB
			WEIS							1219.5	1220.8	3				IIIG
	1213	2107	SGMR										1220.0	1222.1	2	IIIG
			WEIS							1223.9	1224.2	1				IIIG
	1400	2400	BOUL							1551	2310	1	1551	2310	1	CONT
	1417	2337	HARV							1700	2239	1				IN
			HARV							1731	2152	1	1731	2152	1	IIIN
			HARV							1752	1753	2	1752	1753	2	IIIG
			HARV							2026	2027	3	2026	2027	3	IIIG
	2029	2400	CULG							2029	2400	1				IIIS
			CULG							2135.5		1	2135.5		1	IIIB
			HARV							2136		3	2136		3	IIIG
	2212	2400	MANI													
19	0000	0911	MANI													
	0000	0729	CULG							0000	0729	1				IIIS
			CULG							0008		2	0008		1	IIIB
	0732	1514	OURN							0900	0901	2				I
	0952	1503	WEIS							0900.4	0901.3	2				IIIG
	0841	0935	OWIN				0900.6	0901.1	2	0900.6	0901.1	2				IIIG
			WEIS							1012.5	1012.9	1				IIIG
			WEIS							1014.1	1014.3	1				IIIB
			WEIS							1035.3	1035.8	3				IIIB
			WEIS							1057.3	1058.0	3				IIIG
	1236	1513	OWIN				1236	1513	1	1236	1513	1				IN,W
			OWIN				1331.7	1332.0	1	1331.7	1332.0	1				IIIG,W
	1214	2107	SGMR										1336.9	1337.3	1	III
	1400	2400	BOUL							1430	2144	1	1430	2144	1	CONT
	1416	2338	HARV							1534		3	1534		3	IIIB
			BOUL							1534.2	2138.4	2	1534.2	2138.4	2	IIIN
			SGMR										1534.3	1534.5	1	III
			HARV							1624	2114	2	1624	2114	2	IIIN
			HARV							1736	1737	2	1736	1737	2	IIIG
			HARV							1751	1752	1	1751	1752	1	IIIG
			HARV							1801	1802	3	1801	1802	3	IIIB
			SGMR										1801.5	1828.5	2	IIIG
			HARV							1815		3	1815		3	IIIG
			HARV							1828		3	1828		3	IIIG
			HARV							1919	1921	3				IIIG,U
			SGMR										1919.7	1920.2	1	III
			HARV							1952	2000	2	1952	2000	2	IIIGG,U
			HARV							2003	2004	2				IIIG
	2029	2400	CULG							2029	2400	1				IIIS
			CULG							2114		2	2114		1	IIIB
			CULG							2119.5	2121	2	2119.5	2121	1	IIIG,V,U
			HARV							2120	2121	3	2120	2121	3	IIIGG,V,U
			CULG							2137	2138	2	2137	2138	1	IIIG,U
			HARV							2138		2	2138		2	IIIG,U
	2213	2400	MANI													
			CULG				2330.5	2331.5	1	2330.5	2331.5	2				IIIG,V,U
			HARV							2331		3				IIIGG
20	0000	0730	CULG							0000	0730					IIIS,W
	0000	0911	MANI													
	0732	1514	OURN							0732 E	1514	2				I,N
	0806	1516	OWIN				0806	1516	1	0806	1516	1				IS
			OWIN							0930.6		2				IIIB
	0754	0953	WEIS							0943	1129	1				IN
	1214	2107	SGMR													
			OWIN				1228.6	1237.1	1	1228.6	1237.1	1				UNCLF
	1400	2400	BOUL													
			OWIN				1402.1	1402.5	2	1402.1	1402.5	2				IIIG
	0958	1443	WEIS							1402.1	1402.6	2				IIIG
			OURN							1402.2	1402.5	3				IIIG
			OWIN				1417.9	1425.0	2	1421.0	1423.3	2				IIIGG
	1417	2339	HARV							1419	1420	1				IIIGG
			WEIS							1419.5	1023.8	2				IIIGG
			OURN							1422.9	1423.2	2				IIIG
			HARV							1423	1425	1				IIIG
	2030	2400	CULG							2030	2315					IIIN,W
			CULG				2030	2205		2030	2205					IS,W
	2213	2400	MANI													
21	0000	0912	MANI													
	0000	0722	CULG							0114	0722	1				IIIN
			CULG				0250	0722	1	0300	0722	1				IS
	0732	1514	OURN							0732 E	0830	1				I,N
	0759	1444	WEIS							0801	1443	1				IN
			WEIS							1324.5	1324.7	1				IIIB
			WEIS							1348.0	1348.5	1				IIIG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

DECEMBER 1974

DEC 1974	TIMES OF OBSERVATION		STATION	EVENTS													SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.		
21	1215	2108	SGMR										1348.2	1348.7	1		III
			WEIS							1409.7	1410.0	2					IIIG
	1417	2339	HARV							1516	1613	1					IN
	1400	2400	BOUL							1519.0	2005	1	1519.0	2005	1		CONT
			BOUL							1547.1	1805	1					IS
			HARV							1719	1720	2					IIIB
			HARV							1822	1823	2	1822	1823	2		IIIB,U
			SGMR										1822.6	1823.1	1		III
	2030	2400	CULG							2030	2400	1					IS
			CULG							2055	2400	1					IIIN,U
	2214	2400	MANI														
			CULG							2258		1					IIIG,U
22			CULG														
	0000	0730	CULG							0000	0535	1					IS
	0000	0912	MANI							0000	0602	1					IIIN
	0732	1514	DURN														
	0800	1444	WEIS														
	1400	2400	BOUL							1603.2	1647.3	1	1603.2	1647.3	1	IV	
			BOUL							1605.8	1610.2	2	1605.8	1610.2	2		IIIGG
	1416	2339	HARV							1606	1614	2	1606	1614	2		IIIGG
			HARV							1615	1624	1				II	
			BOUL							1615.5	1624.2	2	1618.0	1625.0	2	II	
			BOUL							1628.3	1633.9	2	1628.3	1639.2	2	II	
			HARV							1629	1644	2	1629	1644	2	II	
	1215	2108	SGMR										1632.8	1635.2	2	II	
			BOUL										1641.5	1644.6	1	II	
			BOUL										1642.0	1646.1	2	II	
			BOUL										1647.3	1930	1	IV	
	2030	2400	CULG							2030	2400						IIIN,W
			CULG							2042	2043	1					IIIG
	2214	2400	MANI														
23	0000	0912	MANI														
	0000	0726	CULG							0000	0726						IIIN,W
			CULG							0446	0447	2					IIIG
			CULG							0532	0534	2					IIIG
			CULG							0626	0626.5	2					IIIG
			CULG							0723.5	0724.5	2					IIIG,U
	0733	1514	DURN							0733 E	1514	2					I,N
			DURN							0736.5	0739.5	3					IIIGG
	1106	1431	DWIN				1106	1431	1	1106	1431	1					IS
			DWIN				1215.8	1216.5	3	1215.8	1216.5	3					IIIGG
	1216	2109	SGMR														
			DURN							1216.1	1216.3	3					IIIG
	0801	1442	WEIS							1216.1	1216.6	2					IIIG
			DWIN							1217.4	1217.7	2					IIIG
			DWIN							1234.8	1235.3	2					IIIGG
	1418	2340	HARV														
	1400	2400	BOUL							1534.4	1534.6	1					III
	2031	2400	CULG							2150	2400	1					IIIN
			CULG				2150.5	2153		2150.5	2153	1					IIIG
	2215	2400	MANI														
24	0000	0913	MANI														
	0000	0731	CULG														
			CULG							0046	0652						IIIN,W
	0733	1514	DURN							0443	0444	1					IIIG
	0818	1256	DWIN				0818	1256	1	0818	1256	1					IS
	0840	1445	WEIS														
	1216	2110	SGMR														
	1400	2400	BOUL														
	1418	2341	HARV														
	2031	2400	CULG							2035	2400						IIIN,W
	2216	2400	MANI														
25	0000	0914	MANI														
	0000	0732	CULG							0000	0345						IIIN,W
	0734	1514	DURN														
	0802	1436	WEIS														
	1400	2400	BOUL							1913.5	2000	1	1913.5	2000	1	IV	
	1417	2342	HARV							1914	1936	3	1914	1934	3		IIIGG,V
			BOUL							1914.8	1915.0	1	1914.8	1915.0	1		III
	1217	2110	SGMR										1914.8	1926.0	2		IIIG
			BOUL							1917.0	1923.3	2	1917.0	1923.3	2		IIIGG
			HARV							1921.8	1929	3	1922.5	1929	3	II	
			BOUL							1922.5	1947.4	1	1927.6	2004.2	1	II	
			HARV							1924	1957	2	1930	1957	2	II	
			BOUL							1929.8	1931.0	2	1929.8	1931.0	2		IIIG
			SGMR										1939.8	1944.7	2	II	
			HARV							2000	2001	2	2000	2001	3		IIIB
	2332	2400	CULG														
	2216	2400	MANI														
26	0000	0915	MANI														
	0000	0725	CULG							0013							IIIB,W
	0734	1514	DURN														
	0759	1445	WEIS							0819.2	0821.2	2					IIIG
	1217	2111	SGMR														
	1400	1933	BOUL														

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

DECEMBER 1974

DEC 1974	TIMES OF OBSERVATION		STATION	EVENTS													SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
26	1417	1540	HARV														
	1556	2342	HARV														
	2028	2400	CULG							2141	2141.5						IIIG,W
			CULG							2154	2155.5	1					IIIG
	2217	2400	MANI														
27	0000	0916	MANI										0019.1	0020.2	2		III
	0000	0733	CULG				0019.5	0020	1	0018	0022	2	0019	0021	1		IIIGG,V
			CULG							0024.5	0025.5	1					IIIG
			CULG							0025	0031	1				IIH	
			MANI										0027.2	0027.9	1		III
	0734	1520	DURN														
	0800	1447	WEIS														
	1417	2343	HARV							1647	1648	3	1647	1648	3		IIIG
	1217	2111	SGMR										1647.4	1647.6	1		III
	1825	2400	BOUL														
	2033	2400	CULG														
	2217	2400	MANI														
28	0000	0916	MANI														
	0000	0733	CULG							0040.5	0041	1					IIIG,U
	0739	1520	DURN														
	0802	1111	WEIS														
	1117	1447	WEIS														
	1218	2112	SGMR														
	1417	2344	HARV														
	1430	2400	BOUL														
	2135	2400	CULG														
	2217	2400	MANI														
29	0000	0917	MANI														
	0000	0734	CULG														
	0733	1520	DURN														
	0802	1448	WEIS														
	1218	2113	SGMR														
	1417	2345	HARV														
	1430	1730	BOUL														
	1900	2400	BOUL														
	2030	2400	CULG							2129.5							IIIB,W
	2218	2400	MANI														
			CULG							2323.5		1					IIIB
30	0000	0734	CULG				0700		1	0700		2	0700		1		IIIB
	0000	0917	MANI										0700.2	0700.4	2		III
			CULG							0709.5	0710.5	1					IIIG
	0734	0843	DURN														
	0804	1450	WEIS														
	0857	1520	DURN														
	1218	2114	SGMR														
	1417	2346	HARV														
	1430	2400	BOUL														
	2035	2400	CULG														
	2218	2400	MANI														
31	0000	0918	MANI														
	0000	0735	CULG														
	0734	1522	DURN														
	1218	2115	SGMR														
	1417	2346	HARV														
	1430	2400	BOUL														
	2219	2400	MANI														
	2030	2400	CULG							2243	2305						IIIN,W
			CULG							2305	2400	1					IIIS

The symbols used in connection with the spectral type in describing the important bursts are as follows:

B = Single burst
G = Small group (< 10) of bursts
GG = Large group (> 10) of bursts
C = Underlying continuum (particularly with type I)
S = Storm in the sense of intermittent but apparently connected activity
N = Intermittent activity in this period
U = U-shaped burst of Type III
RS = Reverse slope burst
DP = Drifting pairs
DC = Drifting Chains
H = Herringbone
W = Weak
P = Pulsations
CONT = Continuum
UNCLF = Unclassified activity

SELECTED SOLAR EVENTS

DECEMBER 1974

Culgoora

UT Date 1974. December	HELIOGRAPH EVENT							Spectral Type	REMARKS
	Start (UT)	End (UT)	Freq. (MHz)	Positions: Central Dist. ($R_\odot$)	Positions: Position Angle (Deg.)	Polarization	Intensity (1-3)		
18	0220	0221	160	0.5	10	0	1	IIIG	*
			80	0.6	0	0	1		
			43.25	0.7	20	-	2		
19	0123	0124	160	1.0	40	0	1	IIIG	*
			80	0.9	30	0	1		
			43.25	1.0	30	-	2		
	2330	2332	160	0.8	340	0	2	IIIG,V,U	
			80	0.8	350	0	2		
			43.25	0.9	350	-	2		
24	0443	0444	160	1.0	330	0	1	IIIG	*
			80	1.2	330	0	2		
27	0018	0022	160	0.9	300	0	3	IIIGG,V	
			80	1.2	300	0	3		
			43.25	1.6	300	-	3		
	0025	0029	80	1.2	300	0	3	II	
			43.25	1.6	300	-	1		

Days without Heliograph observations: Nil

* Other type III's observed at same position during day.

COSMIC RAY INDICES

(Neutron Monitors)

DECEMBER 1974

DEC 1974	THULE Average cts/hr	ALERT Average cts/hr	DEEP RIVER Average cts/hr	CALGARY Average cts/hr	SULPHUR MT Average cts/hr	KIEL Average cts/hr	CLIMAX Average cts/hr	TOKYO Average cts/hr
1	4454.6	7289.2	6845.6	11648.5	8660.3	6174.6	4108.0N	3538.3
2	4473.5	7313.1	6871.2	11670.3	8695.6(21)	6169.5	4132.3N	3543.7
3	4472.3	7319.7	6891.6	11669.1	8702.7	6182.4	4131.2N	3543.5
4	4458.7	7305.3	6883.9	11636.7	8699.2	6201.2	4127.4N	3544.5
5	4463.9	7296.5	6875.6	11636.8	8695.4	6215.8	4134.3N	3549.0
6	4489.0	7338.8	6893.5	11702.9	8738.7	6222.5	4144.7N	3557.3
7	4502.0	7373.3	6899.8	11758.2	8751.3	6220.8	4156.0N	3552.7
8	4503.1	7384.2(22)	6904.3	11690.4	8725.5	6222.2	4159.5N	3543.0
9	4453.1	7319.5(19)	6865.5	11588.0	8657.1	6186.5	4137.5N	3529.4
10	4457.0	7298.3	6855.8	11599.8	8669.2(20)	6208.4	4141.6N*	3525.3
11	4439.3	7304.0(23)	6829.2	11588.5	8692.6(20)	6223.4	- (0)	3519.2
12	4440.5	7332.2	6836.0	11589.9	8671.2	6218.2	- (0)	3524.4
13	4448.5	7348.2	6831.0	11575.7	8669.8	6212.0	4173.0N*	3514.9
14	4462.8	7359.2	6864.2	11610.4	8692.6	6197.2	4146.8N	3518.0
15	4474.8	7357.8	6892.3	11670.3	8757.7	6223.8	4163.5N	3526.4
16	4509.5	7413.4	6918.2	11710.5	8793.4	6275.2	4158.6N*	3536.3
17	4512.9	7423.1	6931.0	11728.9	8821.4(22)	6311.2	4222.0N*	3536.0
18	4491.7	7394.5	6916.1	11688.6	8785.4	6285.0	4179.6N	3539.3
19	4500.0	7416.4	6926.3	11701.0	8806.3	6256.5	4182.0N	3545.5
20	4487.7	7366.3	6890.6	11655.9	8772.6	6221.2	4166.1E	3542.4
21	4477.8	7375.1	6894.3	11623.4	8770.2	6207.7	4161.7E	3541.5
22	4481.4	7409.3	6885.8	11594.5	8764.0	6214.1	4179.0E	3536.2
23	4472.7	7401.6(9)	6884.5	11713.4	8782.2	6221.0	4195.7E	3553.7
24	4508.3	- (0)	6936.2	11775.6	8839.7	6297.8	4213.2E*	3558.3
25	4510.7	7480.0(1)	6936.8	11736.2	8814.0	6264.2	- (0)	3547.9
26	4447.8	7371.2(23)	6855.7	11565.9	8692.1	6201.2	4161.0E*	3540.1
27	4412.2	7330.5	6828.5	11520.6	8682.5	6190.5	4137.7E	3540.0
28	4387.7	7294.0	6808.6	11529.2	8624.2	6142.8	4104.2E	3532.0
29	4387.4	7281.3	6799.6	11534.1	8641.0	6159.7	4113.0E	3526.8
30	4392.3	7294.5	6823.6(22)	11538.3	8660.6	6161.3	4112.2E	3533.2
31	4431.3	7368.5	6849.3	11632.4	8694.4	6188.3	- (0)	3548.3
MEAN	4464.7	7352.0	6875.0	11641.4	8723.3	6215.4	4153.4	3538.3

( ) Number of hours for which data are available if less than 24.
Asterisk indicates sum of both sections at Climax is less than 40 hours.

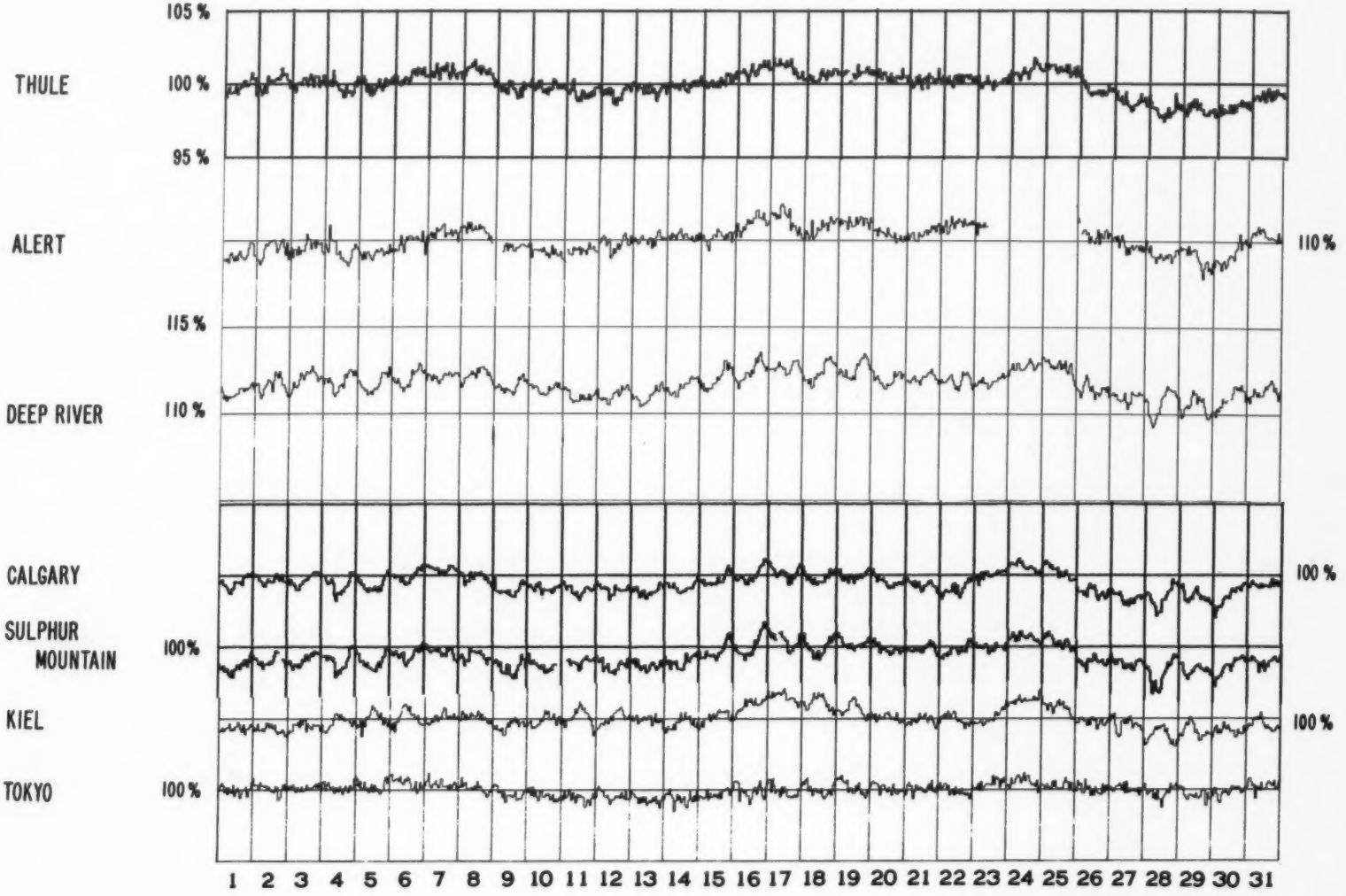
Thule, Alert, Calgary, Sulphur Mountain, Kiel and Climax Scaling Factors = 100.
Deep River Scaling Factor = 300.
Tokyo Scaling Factor = 128.

N: One section normalized by multiplicative factor.
E: One section estimated from sections ratio.

COSMIC RAY INDICES

(Neutron Monitors)

DECEMBER 1974



GEOMAGNETIC ACTIVITY INDICES

DECEMBER 1974

Day	Three-Hour Range Indices Kp								Sum	Prel Ci	Cp	Ap	aa			
	1	2	3	4	5	6	7	8					N	S	M	
1QQ	1	0+	0+	1	1	2-	3-	3	11	0.4	0.3	6	12	18	9	22
2	4-	4	3-	3-	2+	3-	3	2+	23+	0.8	0.8	15	24	25	23	26
3	3+	3	2+	3-	3-	2	4+	3+	24-	1.0	0.9	15	30	30	24	36
4 Q	3+	3	3-	2	1+	1+	1	1	16-	0.4	0.5	9	15	21	26	11
5QQ	1-	1-	1-	1	2+	2+	3	2	13-	0.4	0.3	7	16	17	7	27
6QQ	2	2-	1-	2-	1	1	0+	1-	9	0.1	0.2	4	7	10	11	6 C
7 Q	2-	1+	2-	2+	3-	3-	2-	2	16	0.5	0.4	8	13	21	16	19
8	2-	2	2	3-	3	3+	3	4	22-	0.9	0.8	13	26	27	18	36
9 D	4	5	4	5	5	5+	5	4+	38-	1.6	1.5	42	70	68	50	88
10	4+	4	4-	2+	3+	4-	3	3-	27	1.1	1.0	20	32	27	29	31
11	3-	4-	3+	4	4	3+	4+	2+	28-	1.1	1.1	21	35	33	26	42
12	3	4-	4-	3+	4	3+	2	3	26	0.9	1.0	18	26	37	33	30
13	3-	3+	2	2+	4-	5-	5-	4	27+	1.1	1.1	22	45	32	19	57
14	4	4-	3+	1+	0+	2	3-	2+	20-	0.5	0.7	13	24	19	27	17
15	2	3-	4-	3	3-	3	3-	3+	23	0.7	0.8	14	24	21	21	25
16QQ	2-	0+	1+	1	1	2+	3+	3-	14-	0.4	0.4	8	15	20	8	27
17	3-	4-	3-	2+	2	4-	4	4+	25+	1.0	1.0	18	36	37	26	48
18 D	4+	4	4	4	4	5-	4	3	32	1.2	1.2	28	41	52	45	48
19 D	4+	4	3+	4	3+	3+	5-	5-	32-	1.1	1.2	27	46	41	39	48
20 D	4	3+	3+	4+	4-	3+	3+	3-	28	1.2	1.1	21	37	41	39	39
21	3	4-	3	3+	4-	3+	4-	4-	27+	0.9	1.0	19	32	32	26	39
22	4	4	2+	2	2+	3	2	3-	22+	0.8	0.8	14	21	23	23	22
23	3-	2+	2+	2	3	4+	4+	4-	25-	1.0	0.9	17	41	33	17	57
24	3	3-	2+	2+	3+	3	2+	4-	23-	0.7	0.8	14	26	27	22	31
25 Q	2	2	1	2-	1+	3+	5-	2	18	0.8	0.7	12	27	19	15	32
26 Q	2	3	3+	3+	2+	2	3-	2-	20+	0.6	0.7	12	19	21	23	17
27 D	3-	3+	5-	4+	3+	3+	3+	3	28	1.0	1.1	21	35	39	42	32
28	2+	2+	4-	3+	2+	3-	2+	2	21	0.5	0.7	12	19	24	27	16
29 Q	2+	2+	2	3+	3	2+	2+	2+	20	0.6	0.6	11	21	19	20	21
30QQ	2	2-	0+	1-	1-	1-	2+	3	11+	0.3	0.3	6	10	9	8	11 C
31	4+	4+	2+	2-	2-	2+	3	2	22-	0.9	0.8	14	19	34	26	27
									MEAN	0.79	0.80	15	27.3	28.3	27.8	

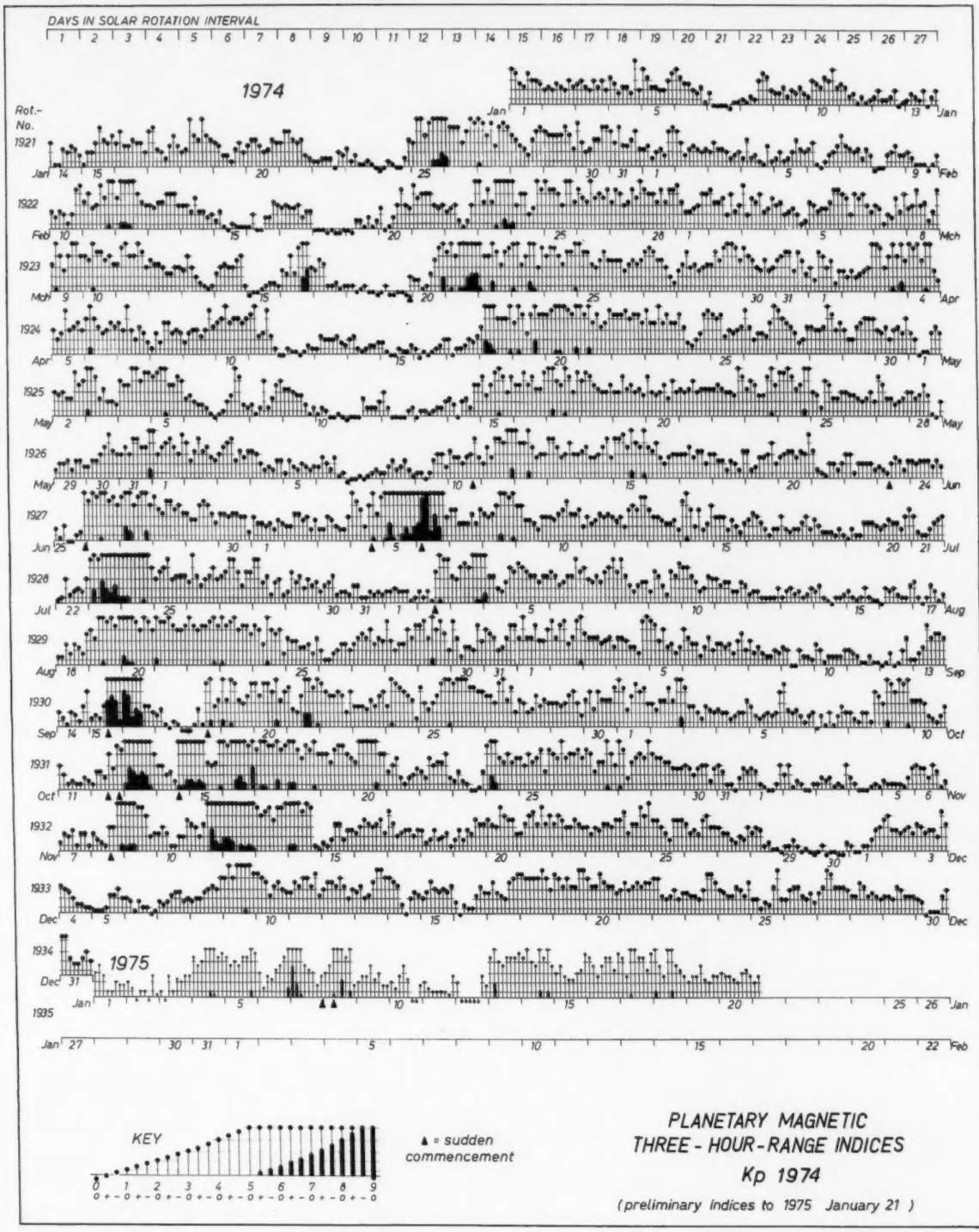
GEOMAGNETIC ACTIVITY INDICES

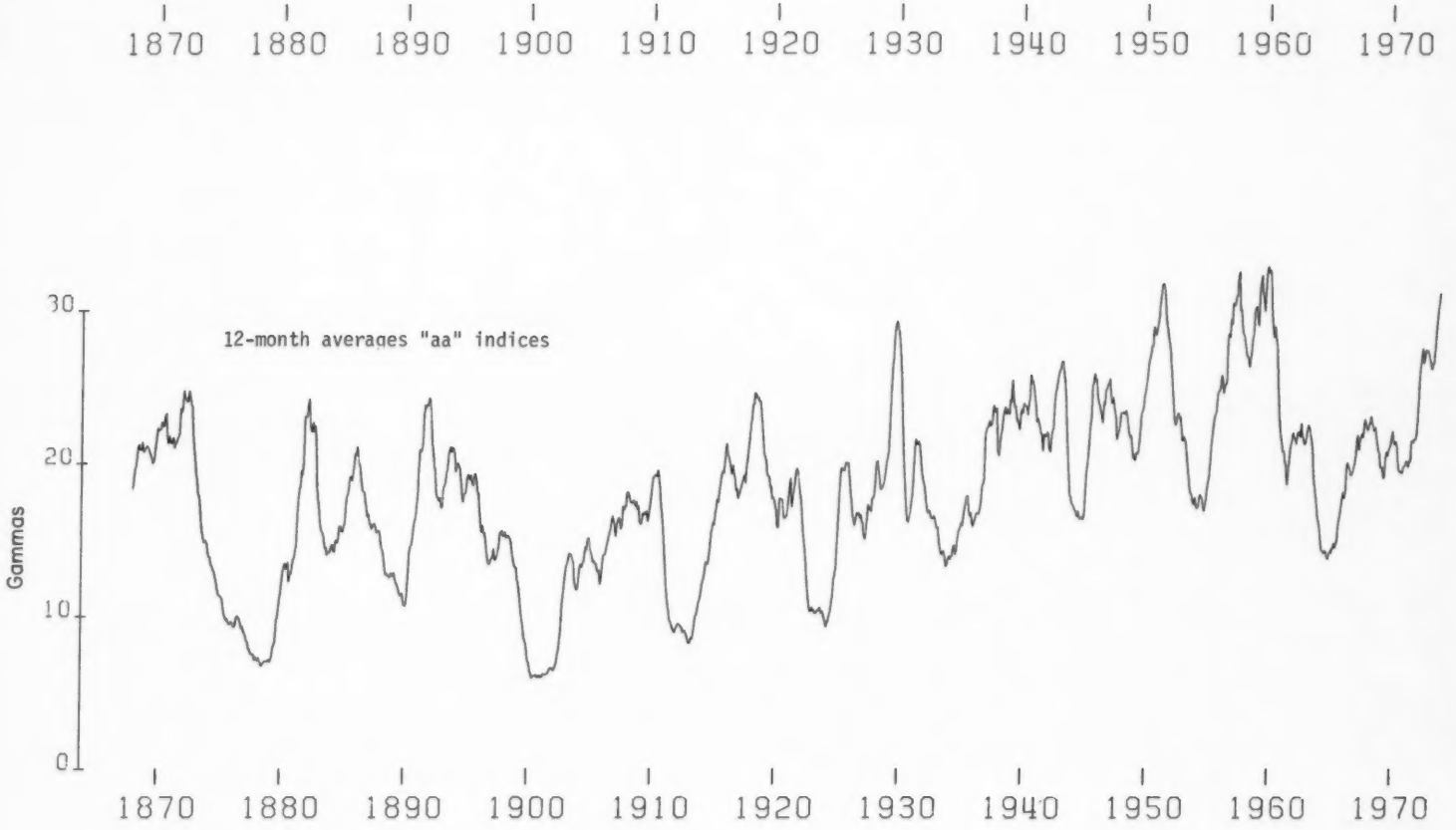
The Kp graph for 1974 is on the following page.

DAILY AVERAGE INDICES Ap

1974

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	17	13	20	17	9	28	10	6	24	28	6	6
2	9	12	18	15	18	18	12	22	32	30	5	15
3	11	8	20	39	24	19	9	35	16	12	6	15
4	13	7	10	35	34	9	31	24	20	8	3	9
5	14	8	18	18	35	6	74	21	19	10	5	7
6	12	7	20	26	6	6	130	20	14	11	10	4
7	2	10	13	18	15	3	15	22	12	6	7	8
8	10	5	17	13	13	6	36	16	7	10	21	13
9	7	4	33	16	11	7	15	16	5	39	39	42
10	14	14	30	28	3	15	20	16	6	10	10	20
11	6	30	32	19	5	32	14	10	4	6	48	21
12	5	40	15	3	5	29	23	5	6	17	70	18
13	5	20	10	7	4	21	12	6	16	86	36	22
14	8	12	16	5	10	18	23	5	9	30	38	13
15	15	4	3	4	30	37	10	4	73	50	10	14
16	15	7	42	4	26	16	10	6	88	68	16	8
17	16	11	9	6	38	15	8	6	3	47	14	18
18	24	1	3	48	24	10	6	10	19	43	8	28
19	9	4	2	39	18	13	6	40	34	29	14	27
20	14	12	23	46	18	18	11	46	35	41	22	21
21	16	23	68	35	18	7	9	39	43	10	24	19
22	5	14	39	31	22	8	8	37	24	15	18	14
23	4	44	42	29	25	7	82	36	16	5	16	17
24	4	29	34	19	39	8	51	26	26	38	26	14
25	50	34	28	20	14	10	22	13	30	22	19	12
26	38	28	20	21	11	40	20	7	38	28	17	12
27	34	26	22	19	14	54	24	18	25	25	9	21
28	18	27	18	23	10	26	18	20	14	29	6	12
29	22		34	19	7	19	13	31	16	18	3	11
30	21		20	16	17	15	8	17	21	12	2	6
31	19		24		30		6	21		8		14
MEAN	15	16	23	21	18	17	24	19	23	26	18	15


DAYS IN SOLAR ROTATION INTERVAL
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
1974
Rot.-No.
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1975
KEY
0 1 2 3 4 5 6 7 8 9
0+ - 0+ - 0+ - 0+ - 0+ - 0+ - 0+ - 0+ - 0+ - 0
▲ = sudden commencement
PLANETARY MAGNETIC
THREE - HOUR - RANGE INDICES
Kp 1974
(preliminary indices to 1975 January 21)



The above graph is compiled from a series of points based on yearly averages of "aa" indices. Each point is a twelve month average plotted at the month of the end of the average. The points plotted at the marked ten year intervals are in each case averages for January to December of that year. The graph begins with the average for 1868 and ends with the average for 1974. This graph was provided by Dr. P. N. Mayaud of the Institut de Physique du Globe, Paris, France, who also provides the daily values of "aa" on a monthly basis.

R9	Rot.-No.	1st day	C9
556 657 777	19	J 3	644 2..
665 455 677	71	J 30	644 2.. 332 ... 466 432 21. 417
665 345 544		F 26	63. ..2 4.. .4. 4.5 665 42. 43. ..4
444 444 777	1883	M 25	342 ..2 63. 462 4.. 766 326 642 32.
544 355 555	84	A 21	543 ... 252 24 222 764 33. ..4 3.7
432 444 322	85	M 18	62. ..3 2.2 ... 5.5 662 ... 2.. ..2
233 467 654	86	J 14	... 3.. ... 2.6 3.2 533 412 .2. 2..
456 775 553	87	J 11	.22 22. ..2 .52 2.. 42. .22 .4. .4.
456 467 522	88	A 7	.32 343 ... 234 ..2 232 .3. ... 63.
352 355 534	89	S 3	.24 353 2.. 242 233 724 ... .65 62.
543 332 456	1890	S 30	555 534 545 623 242 ....2 3..
555 543 235	91	O 27	.66 4.. ... ..2 2.. 42. ..... 36 767 523
676 456 667	92	N 23	767 523 ... .32 ... .2. .26 ..2 753
665 444 423	1893	O 20	.35 3.. 3.. 462 22. 3.. ... 4.. .5
457 664 344	19	J 16	655 325 663 454 542 .24 22. .2. .3.
578 866 655	72	F 12	.54 325 343 2.. 64. ... 234 2.6 733
567 775 333		M 10	... ... 543 ... 225 235 356 443 .44
555 556 642	1897	A 6	22. ... 332 ... 522 532 ... .57 455
356 777 544	98	M 3	2.. 2.. 422 22. 652 2.. ..2 ..2 252
677 546 666	99	M 30	43. .34 3.2 ... ... 232 785 2.3 34.
556 655 545	1900	J 26	243 3.. 22. ..3 2.2 ... ..2 2.2 ..2
567 665 344	01	J 23	246 42. ... 3.. 887 527 56. .22 ..3
466 875 543	02	A 19	444 2.. .56 22. ... ... 3.2 243 .77
435 555 543	03	S 15	656 4.. ..4 4.2 226 2.. ... .2. ..5
223 577 642	04	O 12	556 23. 364 445 3.2 235 568 74. .22
232 355 432	05	N 8	.2. 2.. .46 323 624 3.2 433 2.. ...
235 544 433	1906	O 5	..2 ... .26 266 322 ..4 62. ... 453
455 422 442	19	J 1	3.. 355 244 666 422 2.. 365 .35 556
..2 346 423	73	J 28	654 .44 422 446 532 2.. 234 332 777
333 346 532		F 24	766 755 64. .62 232 24. ..3 .57 777
334 565 432	1910	M 23	777 665 446 876 2.. ..2 .5. 772 777
355 435 42.	11	A 19	777 764 466 675 432 264 43. ..2 576
344 42. .33	12	M 16	665 557 54. .22 2.. ..5 453 2.. 266
433 544 334	13	J 12	655 335 665 ..2 6.. .57 653 2.. ..3
3.2 2.. .22	14	J 9	2.. .22 64. .32 .4. 266 645 563 42
33. ... 235	15	A 5	232 2.. ..2 2.. ... 2.3 576 566 542
775 3.2 245	16	S 1	... 342 227 763 2..3 42. .34 476 662
553 2.. 2.2	17	S 28	... .67 333 .2 534 42. 665 556 52
453 2.. ..2	18	O 25	... 576 52. .54 263 32. .32 345.
345 3.. ..2	19	N 21	52 675 4.. ... .64 32. 522 ... 2..
344 ... .34	1920	O 18	.46 665 ... .35 446 234 43. 2.4 ...
543 2	19	J 14	244 462 44. ..7 665 555 432 222 3..
234 332 222	74	F 10	466 53. 23. .35 476 666 655 525 534
232 222 .22		M 9	666 424 .72 ..5 767 665 556 554 466
245 653 222	1924	A 5	565 446 5.. ... .76 766 655 555 542
676 42. ..2	25	M 2	566 64. 33. ... 366 655 555 654 343
245 543 22.	26	M 29	246 655 2.. ..2 466 556 442 352 222
.367 52 454	27	J 25	277 654 232 678 464 545 353 22. .32
554 323 454	28	J 22	277 556 532 ..5 655 554 443 ... ...
332 ..2 346	29	A 18	267 666 632 556 456 645 542 2.. ..4
552 .24 467	1930	S 14	277 .56 676 466 664 456 632 23. 363
642 ..2 223	31	O 11	.47 677 776 734 .65 665 532 2
22. 233 2..	32	N 7	256 277 663 442 355 546 542 ... .44
..2 333 3.2	33	O 4	2.. 247 555 534 256 655 444 335 .. 4
	1934	O 31	42. 276 677 32. .66 466 633
	35	J 27	preliminary

Symbol	.	,	2	3	4	5	6	7	8	9
$\bar{R}$ =	0	1-15	16-30	31-45	46-60	61-80	81-100	101-130	131-170	171...
R9,C9 =	0	1	2	3	4	5	6	7	8	9
Cp =	a.0-a.1	a.2-a.3	a.4-a.5	a.6-a.7	a.8-a.9	1.0-1.1	1.2-1.4	1.5-1.8	1.9	2.0-2.5

DAILY GEOMAGNETIC CHARACTER FIGURES C9 AND 3-DAY MEAN SUNSPOT NUMBERS R9

For explanation and previous years see J. Bartels, Abhandlungen der Akademie der Wissenschaften zu Göttingen, Beiträge zum I.G.J., Heft 3 (1958) (may be requested from Institut für Geophysik, Postfach 876, 34 Göttingen, Germany)

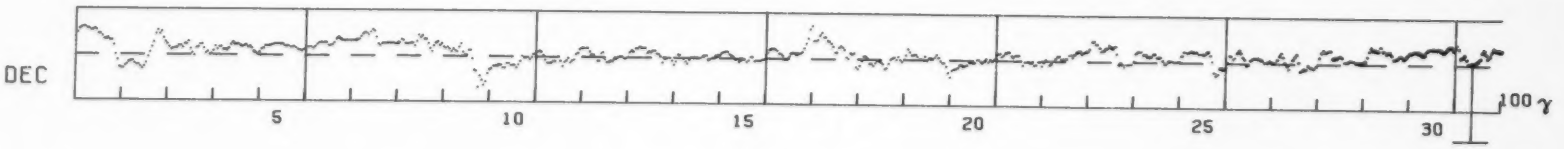
HOURLY EQUATORIAL Dst VALUES (PROVISIONAL)

NASA/GODDARD SPACE FLIGHT CENTER

DECEMBER 1974

(Time-UT)

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	29	33	35	36	36	34	33	31	32	33	31	27	26	24	20	19	21	18	19	11	-1	-8	-17	-19
2	-18	-15	-13	-10	-8	-9	-12	-14	-13	-16	-19	-16	-11	-3	3	10	16	27	32	27	30	21	17	14
3	10	7	8	9	9	12	12	9	14	13	17	7	2	-1	9	10	13	14	8	1	4	0	1	5
4	11	7	10	11	7	7	5	8	13	16	14	14	14	11	10	12	13	10	11	8	4	2	0	3
5	7	9	12	12	12	13	14	15	15	15	14	14	12	11	11	10	10	11	9	7	6	5	7	7
6	10	11	11	9	11	14	16	17	16	17	16	13	13	14	16	21	23	22	20	19	19	20	19	19
7	20	19	21	22	25	28	30	29	27	31	34	32	24	15	13	16	16	16	17	16	17	16	15	15
8	17	21	20	16	15	16	17	16	13	19	27	24	26	22	21	16	9	6	13	17	19	14	16	12
9	10	12	9	6	9	7	5	12	16	5	2	1	8	8	-4	-19	-20	-41	-26	-32	-39	-34	-23	-18
10	-16	-13	-13	-13	-11	-12	-15	-15	-9	-9	-12	-12	-11	-15	-11	-6	1	-1	-1	-2	-4	-1	3	4
11	6	8	6	2	-5	-8	-8	-8	-6	-6	-1	0	-6	-13	-7	-5	-2	-8	-5	-4	3	5	10	12
12	11	12	12	7	3	3	0	-5	-5	4	6	-3	-7	-7	-5	-6	-2	-1	0	1	1	-1	-2	0
13	6	9	7	11	12	14	12	12	12	5	7	6	9	9	5	4	1	-7	-1	-1	0	-1	-4	-10
14	-5	4	3	0	-2	-5	-8	-3	0	0	1	0	-1	0	2	3	3	-3	-1	0	-1	1	3	4
15	6	8	9	8	5	3	1	-2	-1	-5	-3	-1	-2	-5	-3	1	2	-4	-3	-4	-3	-2	-1	4
16	7	11	13	13	11	10	6	5	3	-1	-1	2	6	8	7	5	7	7	9	14	20	27	39	43
17	23	23	25	31	34	28	28	24	22	20	16	8	8	15	17	15	12	2	0	8	6	8	-11	-13
18	-9	-2	4	4	1	-6	-6	-9	-5	-2	-2	-4	-6	-13	-11	-5	0	2	3	0	4	0	-3	0
19	6	14	10	6	6	7	4	1	1	0	4	-1	2	2	0	3	6	3	-1	-4	-4	-8	-17	-23
20	-14	-12	-11	-10	-7	-7	-9	-7	-6	-3	-3	-4	-3	0	1	-1	-4	-1	2	-2	1	-1	1	3
21	9	9	5	7	10	11	10	6	4	6	7	6	-1	-6	-2	-1	-1	-3	-1	-6	-5	-1	-2	-7
22	-2	2	0	-5	-4	0	3	6	6	3	3	3	3	8	9	5	9	11	13	13	10	12	13	14
23	16	26	27	23	22	18	14	13	17	18	22	19	17	20	10	-4	-1	-4	-7	-4	-4	-3	-4	1
24	11	13	14	14	10	9	7	6	7	10	10	6	6	6	2	-2	-2	2	2	2	0	0	1	0
25	9	14	13	12	14	15	14	13	13	11	11	11	10	13	15	9	1	-13	-17	-15	-7	-6	-9	-6
26	1	10	9	5	7	14	17	14	8	5	-3	-2	4	6	7	7	7	5	4	1	1	1	3	1
27	1	1	5	10	14	9	1	-3	-7	0	5	9	12	1	-10	-8	-7	-8	-2	-5	-5	-7	-4	-1
28	8	15	19	15	16	18	17	7	9	7	10	10	8	2	2	3	5	4	3	1	1	2	0	2
29	4	10	17	21	18	19	17	17	23	18	17	14	16	16	12	6	7	8	11	11	7	9	11	14
30	16	16	17	17	15	14	12	13	18	20	21	20	20	20	21	20	18	16	18	22	24	23	20	22
31	26	22	9	11	13	7	2	2	3	3	4	6	9	17	20	15	9	12	18	22	20	19	19	18



PRINCIPAL MAGNETIC STORMS

DECEMBER 1974

OBS. 2 letter IAGA code	GEOMAG-NETIC LATI-TUDE	COMMENCEMENT DAY	hr min (UT)	TYPE	SC - AMPLITUDES D(')	H(γ)	Z(γ)	MAXIMUM 3 HOUR - INDEX K DAY(3 HOUR PERIOD)	K	RANGES D(')	H(γ)	Z(γ)	UT END DAY	HOUR
HY	7.6N	2	1230	..	..	..	..	02(6,7) 03(4,5)	4	3	98	10	04	12
CO	64.6N	8	08--	..	..	..	..	09(4,5)	7	277	1700	1240	10	21
NE	55.1N	8	1342	..	..	..	..	11(4) 12(2,3)	5	37	130	134	14	10
WI	54.2N	8	16--	..	..	..	..	09(6,7)	6	40	180	75	10	06
EB	43.9N	8	16--	..	..	..	..	09(5,6,7)	5	15	125	72	10	09
TU	40.4N	8	15--	..	..	..	..	09(2,4,5)	5	16	110	20	10	19
HY	7.6N	8	0900	..	..	..	..	09(6)	6	5	119	11	11	21
GU	4.0N	8	1342	..	..	..	..	09(5)	5	0	80	10	10	21
PM	18.7S	8	09--	..	..	..	..	09(4,5) 11(4)	5	7	80	50	12	18
GN	43.2S	8	09--	..	..	..	..	09(5)	6	16	100	110	11	24
HR	33.7S	9	07--	..	..	..	..	09(6)	6	31	123	122	10	04
KG	56.5S	9	08--	..	..	..	..	09(6)	8	--	--	--	10	18
WI	54.2N	13	12--	..	..	..	..	13(6,7)	6	30	195	35	14	05
HY	7.6N	16	1530	..	..	..	..	17(6,7)	5	4	115	14	18	22
CO	64.6N	17	16--	..	..	..	..	18(5) 20(4)	7	153	1370	900	20	23
NE	55.1N	17	15--	..	..	..	..	18(3) 19(2)	5	22	117	77	20	24
WI	54.2N	17	16--	..	..	..	..	18(6)	6	30	180	35	20	05
TU	40.4N	17	15--	..	..	..	..	17(8) 18(1,3,4,5) 19(1,2,4,7,8) 20(1,4)	4	10	65	25	20	22
HY	7.6N	22	1230	..	..	..	..	23(5,6)	5	3	92	8	23	23
CO	64.6N	27	02--	..	..	..	..	27(4)	7	142	1640	680	27	21
NE	55.1N	27	0346	..	..	..	..	28(3)	6	35	157	102	29	01
HY	7.6N	27	0300	..	..	..	..	27(3,5,6)	4	4	95	9	27	22
HY	7.6N	28	0139	SC	- 0.3	+ 9	0	--	-	--	--	--	--	--
HY	7.6N	30	1900	..	..	..	..	31(2)	4	2	64	11	31	23
GU	4.0N	30	2009	..	..	..	..	30(1)	5	0	90	30	31	07

Reports were received from the following observatories:

College Sitka, Newport Witteveen, Fredericksburg Ebro, Tucson San Juan, Honolulu Hyderabad, Guam Port Moresby, Hermanus Gnangara, Port-aux-Francais

SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS

DECEMBER 1974

PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS (by Dr. A. Romaña)

The meaning of the station symbols is given in the IAGA-Bulletins nr. 12 and 32. Times of ssc and si are mean values. If given by ten or more stations they are underlined.

Sudden commencements followed by a magnetic storm or a period of storminess (ssc)

02 1722 A: LG QU; B: IK LM; C: AQ (si: B: WN FU HU; C: TL)

Sudden impulses found in the magnetograms (si)

16 2355 A: SO LG IK KS QU; B: FU AQ EB TL? PM; C: NI (ssc: B: WN OT LM; C: DB SZ)

Solar-flare effects (sfe)

Effects confirmed by ionospheric or solar observations are underlined.

04 0911 - 0926 SZ

05 1745 - 1755 LG

16 0045 - PP

27 0733 - 0739 SZ

28 1745 - 1755 LG

30 2009 - PP

RADIO PROPAGATION QUALITY INDICES

DECEMBER 1974

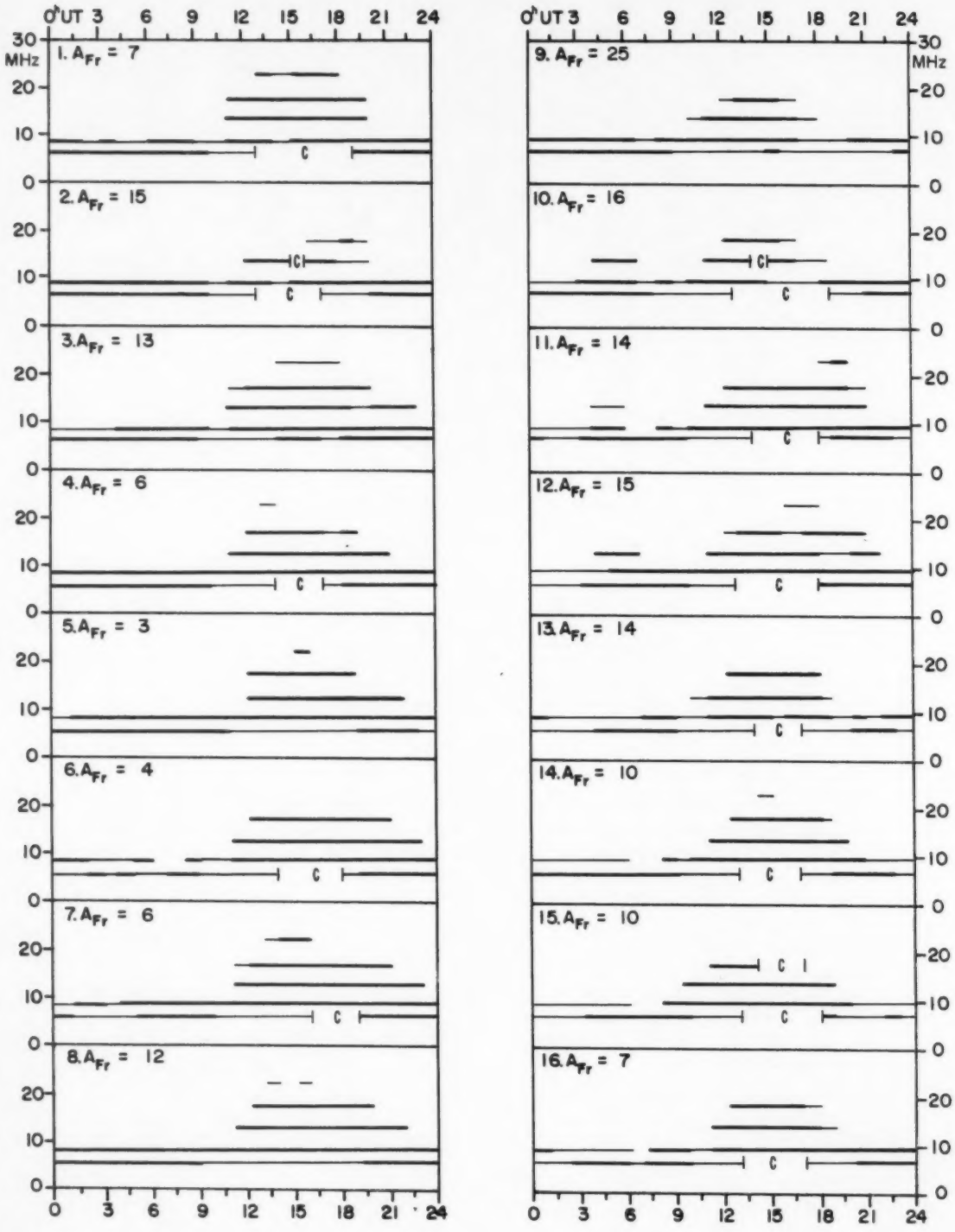
Quality Indices calculated for reception at Lüchow

	TOKYO	HALIFAX	MAURITIUS	CANBERRA
1	6.9	8.5	6.1	4.5
2	6.7	6.1	6.3	4.6
3	6.7	7.5	6.8	5.1
4	6.6	6.7	6.7	4.2
5	6.2	6.1	6.0	4.2
6	6.8	6.0	5.9	4.7
7	6.4	7.4	6.1	4.6
8	6.6	7.2	6.5	4.3
9	6.0	5.2	6.1	4.9
10	6.0	4.8	6.0	3.9
11	5.7	5.5	5.2	4.6
12	5.9	5.8	6.4	4.9
13	6.9	5.6	5.5	4.7
14	6.4	5.4	5.1	4.5
15	7.1	5.7	5.1	4.6
16	6.3	5.2	5.3	4.3
17	6.2	6.6	4.7	4.7
18	5.7	6.3	5.1	4.8
19	6.7	6.5	5.7	4.4
20	5.2	4.5	6.9	4.5
21	5.3	5.0	5.8	4.8
22	4.5	5.9	6.7	4.0
23	6.7	6.6	7.3	4.7
24	6.6	6.8	6.5	4.3
25	6.9	6.7	6.9	4.6
26	7.2	6.3	7.7	4.5
27	6.9	7.0	8.0	4.5
28	6.6	6.4	7.3	4.6
29	6.8	6.7	7.7	4.4
30	7.0	7.7	5.0	3.8
31	5.9	6.0	6.4	4.1

The method of calculation of the radio propagation indices changed in July 1974. An absolute quality figure is calculated for a 24-hour period from Tokyo, Halifax, Mauritius (Africa) and Canberra. The figure 0.0 corresponds to a median field strength of -30 dB above 1μV/m (converted into 1 kW and referred to an omnidirectional antenna). The figures 1 to 10 are in steps of 5 dB with the figure 10.0 corresponding to a median field strength of +20 dB above 1μV/m. The field strength of the frequency with the highest value for each hour is used in place of a mean of all recorded frequencies. This is done on the assumption that the optimum frequency would be used for communication.

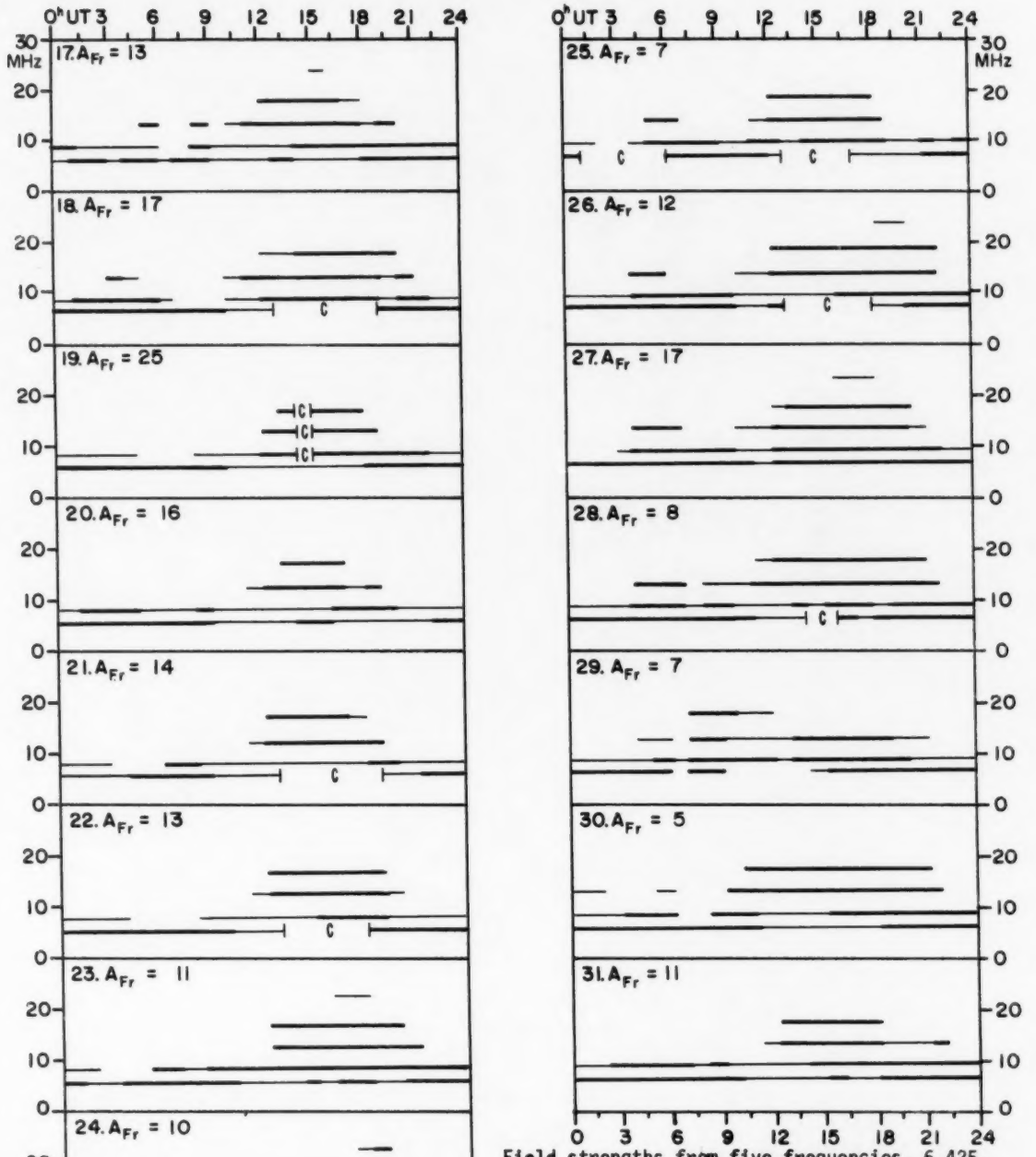
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

DECEMBER 1974



TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

DECEMBER 1974



Field strengths from five frequencies, 6.425, 8.542, 12.813, 17.084 and 22.378 MHz, observed on a Lüchow.- Halifax circuit are represented above. Heavy solid lines represent field strengths ≥-12 dB above 1 μv/m (transmitter power reduced to 1 kW). Observed field strengths between -12 dB above 1 μv/m and -40 dB above 1 μv/m are represented by the fine line. Adapted from Observations by Deutsche Bundespost

USCOMM - ESL

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

DECEMBER 1974

North Atlantic

DEC 1974	WHOLE DAY INDICES NORTH ATLANTIC	ADVANCE FORECASTS (JC-REPORTS) FOR WHOLE DAY	NORTH ATLANTIC 6-HOURLY QUALITY FIGURES 00 TO 06	06 TO 12	12 TO 18	18 TO 24	SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF 02	08	14	20	GEOMAGNETIC INDICES K_{FR} HALF DAY (1)	(2)	A_{FR} OBSERVED
01	6-	6	6o	6-	6o	6-	6	6	5	5	1	2	6
02	6-	6	6o	5o	6-	6-	6	5	6	6	3	3	15
03	6-	6	5-	6o	6+	6o	6	6	5	6	3	3	13
04	6o	6	6-	6o	6+	6-	6	4	5	6	2	1	6
05	6o	5	6o	6-	7-	5+	6	5	5	5	1	1	3
06	6-	5	5o	5+	7-	6o	5	5	5	6	2	1	4
07	6o	5	6-	6o	7-	6+	6	6	5	5	2	2	6
08	6-	5	5+	5o	6o	6o	6	5	5	5	2	3	12
09	5+	4	5+	6-	5+	5-	5	4	4	4	(4)	(4)	25
10	5o	4	5+	4o	5+	5o	4	4	4	5	(4)	2	16
11	5o	4	5+	5o	5o	5o	4	4	4	5	3	3	14
12	5+	5	5-	6-	6-	5o	5	4	4	5	(4)	2	15
13	5+	5	5o	5o	6o	5+	5	4	5	5	2	3	14
14	6-	5	5o	5+	6o	6-	5	5	4	5	3	2	10
15	6-	5	5-	6o	6o	6-	5	5	5	5	3	2	10
16	5+	6	5o	5o	6o	5o	5	5	5	6	1	2	7
17	6-	6	5-	5o	7-	6o	5	5	5	5	2	3	13
18	5+	6	6o	4o	6-	6-	5	4	4	5	3	3	17
19	5+	5	5-	6-	6-	6-	5	5	4	5	(4)	(4)	25
20	5+	5	5+	6-	5+	6-	4	4	5	5	3	3	16
21	5o	5	5+	5-	5o	5o	5	5	5	5	3	3	14
22	5+	5	5o	6-	5+	5o	5	5	5	5	3	2	13
23	6-	6	6-	5o	6-	6-	5	5	5	5	2	3	11
24	6-	6	5+	5o	6o	6+	5	5	5	5	2	3	10
25	6-	6	6-	5o	7-	6o	5	5	5	5	2	2	6
26	5+	6	6-	4+	5+	6-	5	5	5	5	3	2	12
27	6-	6	6o	5+	5+	6-	5	4	5	5	3	3	17
28	5+	6	6-	4+	6-	6o	5	5	5	5	2	2	8
29	5+	6	6o	5-	6-	5+	5	5	5	5	2	2	7
30	6-	6	6-	5+	6o	6+	5	5	5	5	1	2	5
31	6-	6	6o	4-	6o	6+	5	5	5	6	3	2	11

USCOMM-NOAA-ASHEVILLE--2-75--950

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1776-1976

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Descriptive Text Issued as Number 366 (Supplement) February 1975

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Solar - Geophysical Data

NO. 366 FEBRUARY 1975

Part II (Comprehensive Reports)

DATA FOR
AUGUST 1974
JULY 1974
& MISCELLANEA

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO

For obtaining bulletins on a data exchange basis, send request to: World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, Colorado 80302.

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SOLAR - GEOPHYSICAL DATA

No. 366

Issued in two parts

Hope I. Leighton, Editor

J. Virginia Lincoln, Director
Solar - Terrestrial Data Services Division

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Hα SOLAR FLARES
Confirmed
AUGUST 1974

OBSERVATORY	DATE AUG	OBSERVED UT START	OBSERVED UT END	OBSERVED UT MAX. PHASE	LOCATION APPROX. LAT.	LOCATION APPROX. MER. DIST.	LOCATION CENTRAL DISTANCE	LOCATION MCMATH PLAGE REGION	LOCATION CMP DAY	DURATION — MIN.	IMPORTANCE	OBS. COND.	OBS. TYPE	MEASUREMENTS TIME — UT	MEASUREMENTS MEAS. AREA Sq. Deg.	MEASUREMENTS CORR. AREA Sq. Deg.	MEASUREMENTS MAX. WIDTH Hα	MEASUREMENTS MAX. INT. %	REMARKS
857 PALE	01	0012	0041	0014	S06	W67	.927	13084	24.0	29	--F	2	C		.21				3
	01	0055	0058	NO FLARE PATROL															
	01	0419	0445	NO FLARE PATROL															
GRP60861	01	2011	2132	2022	S09	W38	.652	13095	30.0	81	1N				1.69				3 3 3 3
HUAN	01	2011	2043	2019	S09	W38	.652	13095	27.0	32	-N	1	C	2019	.36	.48			E
PALE	01	2011	2138	2021	S08	W38	.647	13095	27.0	87	1B	2	C		2.25				DE U
BOUL	01	2023E	2125D	2026	S09	W38	.652	13095	27.0	62D	1N		C	2026	2.46	3.12			
GRP60862	01	2243	2313	2247	S09	W45	.734	13095	29.6	30	-B				1.05				2 2 2 4
BOUL	01	2243E	2327	2246	S08	W44	.719	13095	26.6	44D	-N		C	2246	.96	1.34			
PALE	01	2245E	2259	2247U	S10	W45	.737	13095	26.6	14D	-B	3	C		1.13				DE
863 BOUL	02	0011	0025	0015	S11	W34	.613	13095	27.5	14	--F		C	0015	.11	.13			3
864 PALE	02	0014E	0027	0015U	S16	W29	.589	13101	27.8	13D	--F	2	C		.19				2
GRP60865	02	0626	0651	0634	S12	W47	.766	13095	29.7	25	-N				.67				3 2 2 4
BUCA	02	0625	0700		S09	W47	.756	13095	26.7	35	-N		C	0627	.66	.90			
ATHN	02	0627	0642	0629	S14	W47	.774	13095	26.7	15	-N	1		0629	.68	.90			
ABST	02	0636E	0645D	0639	S09	W50	.788	13095	26.5	9D	-N		P	0639	.90	1.40			DZ
ABST	02	0638	0655	0642	S11	W51	.804	13095	26.5	17	-F		C	0642	.90	1.40			D
GRP60866	02	0950	1008	(0953)	S09	W49	.778	13095	29.7	18	--F				.92				3 3 3 7
MONT	02	0945	0951	0947	S09	W53	.818	13095	26.4	6	-F		C	0947	.41				
MONT	02	0951	1005	0957	S10	W50	.791	13095	26.7	14	-F		C	0957	.41				
BUCA	02	0955	1010		S09	W46	.745	13095	27.0	15	-N		P	0955	.66	.90			
KHAR	02	0958E	1004D		S10	W50	.791	13095	26.7	6D	1F		C	0958	1.70	2.80			
	02	2035	2125	NO FLARE PATROL															
	02	2255	2304	NO FLARE PATROL															
	02	2307	2316	NO FLARE PATROL															
	02	2331	0014	NO FLARE PATROL															
868 VORO	03	0219	0229	0220	N13	E61	.870	13119	7.7	10	-B		C	0220	.65	1.60		66	D 3
869 TEHR	03	0220	0232	0222	S05	W83	.994	13084	24.9	12	-N	2	C		.64				DE 2
GRP60872	03	1801	1827	1809	S10	W70	.948	13095	29.5	26	--F				.37				3 3 2 3
RAMY	03	1755E	1830D	1808U	S09	W70	.947	13095	26.5	35D	-N	4	C		.31				DE
BOUL	03	1800	1835	1808	S10	W69	.943	13095	26.6	35	-F		C	1808	.43	1.11			
HUAN	03	1809	1815	1810	S10	W72	.959	13095	26.4	6	-F	1	C						
873 BOUL	03	1918	1957	1926	S12	W74	.969	13095	26.3	39	--F		C	1926	.21	.63			3
874 BOUL	03	2019	2025	2020	S11	W70	.949	13095	26.6	6	--F		C	2020	.11	.29			3
GRP60877	04	0643	0703	0649	S10	W82	.993	13095	29.1	20	1N				.77				3 3 3 6
ABST	04	0640E	0654D	0648	S11	W85	.998	13095	25.9	14D	1N		P	0648	.90				EGJ
CATA	04	0645	0705	0650	S09	W80	.988	13095	26.3	20	1B	3		0650	.87			(269)	
BUCA	04	0645	0700		S09	W80	.988	13095	26.3	15	-N		C	0650	.55				D
GRP60880	04	1241	1249	1243	S10	W89	1.000	13095	28.9	8	--F				.31				3 3 1 6
MCMA	04	1239	1251	1242	S10	W90	1.000	13095	25.8	12	-F		C	1242					
RAMY	04	1240E	1245D		S10	W90	1.000	13095	25.8	5D	-N	2	C						DE
HUAN	04	1243	1246	1243	S10	W88	1.000	13095	25.9	3	-F	1	C	1243	.31				
882 MCMA	04	1448E	1450D		S10	W90	1.000	13095	25.9	2D	--F		C	1450					3
883 HUAN	04	1702	1717	1703U	S09	W88	1.000	13095	26.1	15	--F	1	C						3
	04	2147	2155	NO FLARE PATROL															
	04	2206	2214	NO FLARE PATROL															
	04	2300	2311	NO FLARE PATROL															
885 MITK	05	0043E	0107		S08	E90	1.000	13124	11.8	24D	--F		C	0043	.52				3
GRP60886	05	0644	0720	0650	S07	E85	.997	13124	11.7	36	--F				.63				2 1 1 5
ABST	05	0644	0720	0650	S07	E85	.997	13124	11.7	36	-F		C	0650	.63				DG
MONT	05	0701	0713	0705	S07	E87	.999	13124	11.8	12	-F		C	0705	.21				
888 MONT	05	0803	0809	0806	S09	W90	1.000	13095	26.6	6	--F		C	0806	.21				4

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	DATE 1974 AUG	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
	05	2201	2209	NO FLARE PATROL															
	05	2210	2211	NO FLARE PATROL															
892 BOUL	06	0004	0019	0011	S06	E69	.939	13124	11.2	15	--F		C	0011	.32	.84			2
	06	0035	0039	NO FLARE PATROL															
GRP60893	06	0518	0532	0522	S06	E68	.933	13124	11.3	14	1N				1.01				3 3 3 4
ABST	06	0516	0535D	0520	S05	E68	.932	13124	11.3	19D	1B		P	0520	1.18			984	FJ
MITK	06	0519	0531D	0523	S07	E69	.940	13124	11.4	12D	1N		C	0523	.82				E
ATHN	06	0520	0531	0522	S06	E67	.927	13124	11.2	11	-N	1		0522	1.02	1.67			
GRP60894	06	0917	0934	0919	S14	E56	.858	13124	10.6	17	--F				.26				2 2 2 6
TEHR	06	0917	0933	0919	S13	E55	.847	13124	10.5	16	-F	4	C		.19				DE
ARCE	06	0920E	0935D		S14	E57	.866	13124	10.7	15D	-F		C	0925	.33	.70			
GRP60897	06	1932	1947	1938	S18	E77	.984	13127	12.6	15	--F				.32				4 4 3 4
BOUL	06	1929	1950	1939	S17	E73	.969	13127	12.3	21	-N		C	1939	.21	.62			
RAMY	06	1932	1946	1938	S16	E76	.979	13127	12.5	14	-F	2	C		.28				DE
PALE	06	1933E	1946	1934	S19	E78	.987	13127	12.7	13D	-N	2	C		.46				DE
MCMA	06	1933	1945	1939	S19	E80	.992	13127	12.8	12	-F		C	1939					D
898 BOUL	07	0024	0038	0028	S13	E80	.990	13127	13.0	14	--F		C	0028	.21	.72			3
	07	0120	0132	NO FLARE PATROL															
	07	0200	0212	NO FLARE PATROL															
899 TEHR	07	0536	0550	0539	S11	E56	.851	13124	11.4	14	-N	4	C		.64				F 4
GRP60901	See Unconfirmed list																		
GRP60902	07	1736	1744	1739	S08	E38	.649	13124	10.6	8	--F				.39				3 3 2 4
RAMY	07	1734	1743	1738	S07	E38	.645	13124	10.6	9	-F	3	C		.46				DE
BOUL	07	1737	1746	1739	S08	E38	.649	13124	10.6	9	-F		V	1739		.90			
MCMA	07	1739E	1744		S09	E37	.641	13124	10.5	5D	-F		C	1739	.31	.40			E
	07	1912	1923	NO FLARE PATROL															
	07	1950	2002	NO FLARE PATROL															
	07	2011	2025	NO FLARE PATROL															
	07	2026	2117	NO FLARE PATROL															
GRP60903	08	0717	0733	0722	S18	E59	.891	13127	12.7	16	--F				.46				2 2 2 6
TEHR	08	0717	0725	0718	S20	E58	.889	13127	12.7	8	-F	2	C		.28				DE
UPIC	08	0720E	0740U	0725	S16	E60	.894	13127	12.8	20D	-F		P	0725	.63				
GRP60905	08	1734	1757	1738	S06	E55	.831	13128	12.9	23	--F				.44				3 3 3 3
RAMY	08	1734	1752D	1738	S06	E55	.831	13128	12.9	18D	-F	4	C		.74				DE
BOUL	08	1734	1743	1738U	S05	E54	.820	13128	12.8	9	-F		C	1738	.32	.55			
MCMA	08	1735E	1817		S07	E57	.852	13128	13.0	42D	-N		C	1745	.26	.50			D
	08	1841	1850	NO FLARE PATROL															
	08	1911	1932	NO FLARE PATROL															
	08	2045	2210	NO FLARE PATROL															
	08	2257	2305	NO FLARE PATROL															
GRP60908	09	0752	0800	0755	S08	E16	.365	13124	10.5	8	--N				.73				3 3 3 4
CATA	09	0750	0800	0755	S08	E15	.353	13124	10.5	10	-N	3		0755	.58	.62		(195)	
TEHR	09	0751	0757D	0755	S08	E17	.378	13124	10.6	6D	-N	3	C		.73				U H
BUCA	09	0755	0800		S09	E16	.376	13124	10.5	5	-N		C	0756	.88	1.10			
GRP60909	09	0839	0848	0840	S07	E15	.342	13124	10.5	9	--N				.81				3 3 2 7
TEHR	09	0837	0846	0840	S06	E17	.358	13124	10.6	9	-N	3	C		.45				U
CATA	09	0840	0850	0840	S08	E14	.342	13124	10.4	10	-N	3		0840	1.16	1.23		(186)	
HERS	09	0841E	0841U	0841U	S07	E14	.330	13124	10.4		-N		S						B
GRP60910	09	0939	1005	0946	S06	E44	.715	13128	12.7	26	-N				1.66				6 6 6 6
ARCE	09	0933E	1000D		S05	E42	.687	13128	12.5	27D	-F		C	0953	1.33	1.80			T
ATHN	09	0934	1002	0943	S08	E44	.721	13128	12.7	28	-N	1		0943	1.55	1.81			
TEHR	09	0940	1001	0945	S06	E44	.715	13128	12.7	21	-N	3	C		1.09				F
KHAR	09	0940E	1007D	0943	S05	E42	.687	13128	12.6	27D	1N		C	0943	3.40	4.80			EL
KHAR	09	0940E	1007D	0943	S06	E45	.726	13128	12.8	27D	1N		C	0943	3.40	4.80			EL
MONT	09	0943E	1000	0947	S05	E45	.723	13128	12.8	17D	-N		C	0947	1.13				E
CATA	09	0945	1020	0950	S06	E44	.715	13128	12.7	35	1B	3		0950	1.44	2.07		(257)	

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OBSERVATORY	OBSERVED UT				LOCATION						DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1974 AUG	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY		MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP60911	09	1025	1051	1035	S12	E16	.411	13124	10.6		26	--N				.75				2 2 2 6
CATA	09	1025	1055	1035	S12	E16	.411	13124	10.6		30	-N	3		1035	.87	.95		(166)	
MONT	09	1025	1047	1035	S12	E16	.411	13124	10.6		22	-N		C	1035	.62				
GRP60912	09	1929	1940	1934	S11	E09	.334	13124	10.5		11	--F				.35				2 2 2 3
BOUL	09	1928	1940	1935	S11	E08	.326	13124	10.4		12	-F		C	1935	.43	.43			
PALE	09	1930	1940	1933	S11	E09	.334	13124	10.5		10	-F	3	C		.26				H
	09	2022	2106	NO FLARE PATROL																
	09	2209	2218	NO FLARE PATROL																
GRP60913	09	2338	0002	2350	S07	E36	.620	13128	12.7		24	-F				.93				2 2 2 3
HITK	09	2338	2344	2339	S07	E36	.620	13128	12.7		6	-N		C	2339	.82	1.00			DG
PALE	09	2341E	2346D	2346U	S06	E36	.615	13128	12.7		5D	-F	2	C		.83				H
HITK	09	2346	0002	2353	S07	E36	.620	13128	12.7		16	-N		C	2353	1.03	1.30			DG
GRP60914	10	0858	0924	0900	S10	E41	.695	13136	13.4		34	--F				1.17				3 3 3 5
ARCE	10	0850E	0914D		S09	E41	.690	13136	13.4		24D	-N		C	0900	1.13	1.60			
ATHN	10	0853E	0918	0854	S10	E40	.683	13136	13.4		25D	-F	1		0854	.68	.76			
KHAR	10	0905E	0930D	0905	S11	E42	.710	13136	13.5		25D	1F		C	0905	1.70	2.40			G
GRP60915	10	1309	1320	1313	S10	W02	.284	13124	10.4		11	--N				.75				3 3 3 4
RAMY	10	1307	1321	1313U	S11	W02	.300	13124	10.4		14	-N	3	C		.56				DE
BOUL	10	1310	1322	1313	S10	W02	.284	13124	10.4		12	-N		C	1312	1.18	1.18			
ATHN	10	1312E	1318	1313	S10	W01	.282	13124	10.5		6D	-F	1		1313	.52	.50			
GRP60917	10	1748	1804	1756	S05	E08	.240	13124	11.3		16	--F				.74				4 4 4 4
BOUL	10	1746	1810	1800	S04	E08	.226	13124	11.3		24	-F		C	1800	.86	.87			
RAMY	10	1749	1757	1755	S05	E08	.240	13124	11.3		8	-F	3	C		.65				DE
PALE	10	1751E	1805	1753	S06	E08	.254	13124	11.3		14D	-F	2	C		.83				DE
HUAN	10	1754E	1754D		S05	E07	.231	13124	11.3			-F	1	P	1754	.62	.64			E
	10	1923	1936	NO FLARE PATROL																
919 PALE	10	2033E	2036D	2033U	S07	E35	.607	13136	13.5		3D	--F	1	C		.72				F 1
	10	2109	2119	NO FLARE PATROL																
	10	2200	2211	NO FLARE PATROL																
	10	2221	2238	NO FLARE PATROL																
920 PALE	10	2332E	2335D	2332U	S07	E24	.461	13128	12.8		3D	--N	2	C		.72				F 2
	11	2037	2049	NO FLARE PATROL																
	11	2057	2204	NO FLARE PATROL																
	11	2301	2307	NO FLARE PATROL																
GRP60924	12	0103	0145	0112	S06	E08	.256	13152	12.6		42	--F				.94				2 2 2 3
BOUL	12	0102	0145D	0111	S05	E08	.242	13152	12.6		43D	-F		C	0111	.75	.76			
HITK	12	0104	0119D	0112	S06	E07	.247	13152	12.6		15D	-N		C	0112	1.13	1.20			EG
	12	0214	0224	NO FLARE PATROL																
	12	0237	0248	NO FLARE PATROL																
	12	2158	2159	NO FLARE PATROL																
	12	2300	2307	NO FLARE PATROL																
	13	1851	1858	NO FLARE PATROL																
	13	2005	2010	NO FLARE PATROL																
GRP60933	14	1306	1318	1309	S06	W14	.322	13136	13.5		12	--F				.72				4 4 4 6
MCMA	14	1305	1320	1309	S06	W15	.335	13136	13.4		15	-N		C	1309	.62	.60			E
BOUL	14	1305	1320	1309	S06	W14	.322	13136	13.5		15	-F		C	1309	.86	.88			
ATHN	14	1306	1316	1310	S07	W13	.322	13136	13.6		10	-F	1		1310	.68	.64			
MEUD	14	1306	1316		S06	W14	.322	13136	13.5		10	-F		C	1308	.72	.70			E
	14	1716	1719	NO FLARE PATROL																
934 MCMA	14	1731E	1750D		S06	W17	.360	13136	13.5		19D	--N		C	1738	.52	.50			E 2
	14	2152	2217	NO FLARE PATROL																

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	DATE 1974 AUG	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY		MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP60937	15	1412	1421	1414	S03	W32	.550	13136	13.2		9	--F				.53				3 3 2 6
ZURI	15	1411	1421	1413	S03	W32	.550	13136	13.2		10	-N		C	1413	.53	.60			
MEUD	15	1413	1421	1414	S04	W32	.554	13136	13.2		8	-F		C	1414	.52	.60			E
HUAN	15	1413	1422	1414	S03	W33	.564	13136	13.1		9	-F	2	C						
941 PALE	15	2053E	2056D	2053U	S13	E20	.468	13148	17.4		3D	--F	2	C		.27				DE 3
	15	2238	2248	NO FLARE PATROL																
	15	2251	2328	NO FLARE PATROL																
	16	0020	0027	NO FLARE PATROL																
	16	0113	0120	NO FLARE PATROL																
	16	0134	0143	NO FLARE PATROL																
	16	0200	0219	NO FLARE PATROL																
	16	0234	0241	NO FLARE PATROL																
944 TEHR	16	0742E	0758D	0751	S18	W52	.838	13127	12.4		16D	--F	3	C		.09				4
GRP60948	16	1106	1123	1110	S12	E45	.749	13175	19.8		17	-N				.96				3 3 2 7
UPIC	16	1100	1115	1105	S12	E46	.759	13175	19.9		15	-N		P	1105	1.05				
CATA	16	1105	1130	1115	S12	E44	.738	13175	19.8		25	-N	3		1115	.87	1.28		(195)	
WEND	16	1114	1124		S12	E44	.738	13175	19.8		10	-N								
GRP60951	16	1304	1318	1307	N10	W16	.279	13139	15.3		14	--N				.31				3 3 3 7
ZURI	16	1304	1314	1306	N10	W15	.262	13139	15.4		10	-N		C	1306	.53	.50			
TEHR	16	1305E	1323D	1307U	N10	W17	.295	13139	15.3		18D	-N	3	C		.19				DE
MCMA	16	1305E	1318	1308	N10	W15	.262	13139	15.4		13D	-N		C	1308	.21	.20			DB
GRP60952	16	1348	1404	1355	N08	W30	.497	13141	14.3		16	--N				.38				4 4 4 8
TEHR	16	1342E	1400D	1352	N08	W32	.526	13141	14.2		18D	-N	3	C		.19				DE
RAMY	16	1342	1405	1353	N07	W33	.541	13141	14.1		23	-N	4	C		.28				DE H
ZURI	16	1352	1400	1356	N10	W25	.422	13141	14.7		8	-N		C	1356	.53	.60			
MCMA	16	1355	1410D	1357	N08	W28	.466	13141	14.5		15D	-N		C	1357	.52	.50			E
GRP60953	16	1423	1502	1434	N08	W26	.435	13141	14.6		39	--N				.96				6 5 5 9
MCMA	16	1415E	1622D		N08	W30	.497	13141	14.3		127D	-8		C	1431	.83	.90			EHK
ZURI	16	1418	1502	1430	N08	W28	.466	13141	14.5		44	-N		C	1430	.63	.70			
BOUL	16	1418	1509	1428	N09	W28	.467	13141	14.5		51	-F		C	1428	.43	.49			
LOCA	16	1430E	1455	1430	N09	W26	.436	13141	14.7		25D	-N		V	1430	.84	.90			
HURB	16	1432E	1454D	1432	N09	W23	.389	13141	14.9		22D	1N				2.05				
UPIC	16	1445	1500U	1450U	N08	W29	.482	13141	14.4		15D	-N		P	1450	.63				
BOUL	16	1520	1555D	1529	N07	W22	.372	13141	15.0		35D	-F		C	1539	.21	.23			
GRP60954	16	1621	1634	1624	S17	W45	.770	13147	13.3		13	--F				.65				3 3 3 6
RAMY	16	1621	1635	1623	S17	W45	.770	13147	13.3		14	-F	4	C		.46				DE
BOUL	16	1621	1640	1624	S16	W44	.756	13147	13.4		19	-F		C	1624	.75	1.05			
ZURI	16	1622	1626	1624	S17	W45	.770	13147	13.3		4	-F		C	1624	.73	1.10			
956 BOUL	16	1902	1938	1910	N09	W26	.436	13141	14.8		36	--F		C	1910	.96	1.07			3
GRP60957	16	1951	2006	1959	S17	W44	.761	13147	13.5		15	--F				.20				2 2 2 3
BOUL	16	1947	2007	1959	S17	W43	.751	13147	13.6		20	-F		C	1959	.21	.29			
PALE	16	1954	2004	1958	S17	W44	.761	13147	13.5		10	-N	3	C		.19				
GRP60958	16	2019	2027	2022	N11	W29	.484	13141	14.7		8	--F				.35				2 2 2 4
PALE	16	2019E	2025	2022U	N11	W29	.484	13141	14.7		6D	-N	3	C		.27				F
BOUL	16	2019	2028	2022	N10	W28	.468	13141	14.7		9	-F		C	2022	.43	.48			
GRP60960	16	2110	2114	2112	S17	W45	.770	13147	13.5		4	--F				.24				2 2 2 3
BOUL	16	2110	2114	2112	S17	W44	.761	13147	13.6		4	-F		C	2112	.21	.30			
PALE	16	2111E	2114	2111U	S17	W45	.770	13147	13.5		3D	-N	3	C		.27				DE
GRP60961	16	2200	2224	2206	S06	W50	.782	13136	13.2		24	--F				.84				2 2 2 4
BOUL	16	2200	2237	2207	S07	W49	.775	13136	13.2		37	-F		C	2207	.64	.97			
PALE	16	2202E	2211	2204	S05	W50	.780	13136	13.2		9D	-F	3	V		1.03				DE
GRP60963	17	0433	0454	0438	S04	W53	.809	13136	13.2		21	--N				.58				2 2 2 4
PALE	17	0433E	0444D	0437U	S04	W53	.809	13136	13.2		11D	-F	1	V		.83				DE
TEHR	17	0436E	0454	0438	S04	W53	.809	13136	13.2		18D	-8	4	C		.33				DE
GRP60966	17	0834	0850	0835	N08	W36	.584	13141	14.7		16	--8				.66				3 3 3 4
TEHR	17	0833	0908	0836	N07	W36	.584	13141	14.7		35	-8	4	C		.33				DE
ARCE	17	0834	0837	0835	N09	W35	.570	13141	14.7		3	-8		C	0835	1.07	1.30			D
CATA	17	0835E	0845	0835	N09	W36	.584	13141	14.7		10D	-8	3		0835	.58	.71		(372)	

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	DATE 1974 AUG	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY		MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP60967	17	0906	1227	(0913)	S18	W53	.847	13147	13.4		201	1F				1.70				2 1 1 8
KHAR	17	0906E	1227D		S18	W53	.847	13147	13.4		201D	1F		C	0913	1.70				S
UPIC	17	1220E	1300	1235	S19	W53	.850	13147	13.5		40D	1N		P	1235	1.26				
GRP60969	17	1157	1227	1202	N08	W38	.611	13141	14.6		30	-B				1.61				2 2 2 7
TEHR	17	1157	1215D	1201	N07	W37	.598	13141	14.7		18D	-B	4	C		.37				DE
KHAR	17	1203E	1227D	1203	N08	W39	.625	13141	14.6		24D	1N		C	1203	2.84	3.80			
GRP60975	17	1716	1753	1726	S18	W56	.871	13147	13.5		37	--F				.45				3 3 3 4
MCMA	17	1715	1800D	1726	S18	W58	.886	13147	13.4		45D	-N		C	1726	.41	.80			D
BOUL	17	1717	1805	1726	S18	W54	.855	13147	13.7		48	-F		C	1726	.54	.90			
MEUD	17	1727E	1735		S19	W55	.866	13147	13.6		8D	-F		C	1727	.41	.80			
GRP60977	17	1827	1837	1829	S06	W61	.884	13136	13.2		10	--F				.50				2 2 2 5
PALE	17	1827E	1837	1828U	S06	W60	.876	13136	13.3		10D	-F	3	V		.72				DE
RAMY	17	1827	1837	1829	S06	W61	.884	13136	13.2		10	-F	4	C		.28				
978 PALE	17	1934	1942	1936	S03	W61	.888	13136	13.2		8	--F	2	C		.36				3
GRP60979	17	1952	2009	2000	S04	W63	.897	13136	13.1		17	--F				.46				2 2 2 2
RAMY	17	1952	2010	1957	S04	W63	.897	13136	13.1		18	-F	4	C		.46				DE
PALE	17	2003E	2807	2003U	S03	W62	.888	13136	13.2		4D	-N	2	C		.45				F
980 TEHR	18	0441	0451	0445	N09	W47	.726	13141	14.7		10	--F	4	C		.64				DE 3
GRP60983	18	0943	1015	0951	N09	W50	.761	13141	14.7		32	--F				.86				2 2 2 6
TEHR	18	0943	1015	0952	N09	W48	.738	13141	14.8		32	-F	4	C		.58				F
KHAR	18	0945E	1009D	0949	N08	W51	.772	13141	14.6		24D	-F		C	0949	1.13	1.80			
GRP60985	18	1729	1757	1735	S18	W77	.984	13127	13.0		28	--F				.37				2 2 2 4
BOUL	18	1723	1756	1735	S18	W76	.981	13127	13.0		33	-F		C	1723	.11	.33			
PALE	18	1735	1758	1735U	S18	W78	.987	13127	12.9		23	-N	2	C		.62				DE
GRP60986	18	2257	2307	2300	S16	E11	.426	13151	19.8		10	--F				.43				2 2 2 4
BOUL	18	2257E	2307	2258	S16	E11	.426	13151	19.8		10D	-N		C	2258	.64	.65			
PALE	18	2302E	2302D	2302U	S16	E10	.420	13151	19.7			-F	2	C		.21				
989 TEHR	19	0827	0840	0835	S11	E85	.998	13170	25.7		13	--F	4	C		.17				4
	19	2203	2214	NO FLARE PATROL																
	19	2224	2231	NO FLARE PATROL																
	20	0003	0004	NO FLARE PATROL																
	20	0007	0016	NO FLARE PATROL																
	20	0034	0049	NO FLARE PATROL																
	20	0100	0118	NO FLARE PATROL																
	20	0205	0220	NO FLARE PATROL																
GRP60995	20	1010	1027	1010	N12	W90	1.000	13141	13.7		17	2F				.31				2 1 1 7
KHAR	20	1010	1027D	1010	N12	W90	1.000	13141	13.7		17D	2F		C						D
MEUD	20	1019	1050		N12	W85	.994	13141	14.1		31	-F		C	1022	.31				D
	20	2054	2105	NO FLARE PATROL																
	20	2108	2110	NO FLARE PATROL																
	20	2155	2207	NO FLARE PATROL																
GRP61003	21	0648	0657	0650	S11	W21	.462	13175	19.7		9	--F				.77				3 3 3 6
ATHN	21	0647E	0654	0649	S11	W20	.450	13175	19.8		7D	-F	1		0649	.34	.35			
TEHR	21	0648	0701	0650	S10	W20	.440	13175	19.8		13	-F	3	C		.45				DE
ABST	21	0648E	0656	0651	S11	W22	.474	13175	19.6		8D	-N		P	0651	1.53	1.70		640	EJ
GRP61004	21	0750	0803	0754	S11	W22	.474	13175	19.7		13	-N				1.15				2 2 2 6
ABST	21	0750E	0801	0753	S11	W24	.498	13175	19.5		11D	-N		P	0753	1.84	2.00		700	EJ
TEHR	21	0750	0804	0754	S10	W20	.440	13175	19.8		14	-N	3	C		.45				DE
GRP61005	21	0835	0859	0841	S11	W22	.474	13175	19.7		24	-N				1.17				6 6 6 8
ABST	21	0834E	0848D	0838	S12	W24	.507	13175	19.6		14D	1N		P	0838	2.07	2.30		836	FJ
MONT	21	0835	0854	0839	S11	W23	.486	13175	19.6		19	-N		C	0839	1.13				
TEHR	21	0835	0857	0838	S10	W20	.440	13175	19.9		22	-N	3	C		1.09				DE
LOCA	21	0837E	0856	0840	S11	W24	.498	13175	19.6		19D	-N		V	0840	.84	1.00			
ATHN	21	0838E	0859	0849	S11	W21	.462	13175	19.8		21D	-N	1		0841	1.02	1.05			
HERS	21	0841E	0853D	0841U	S12	W22	.483	13175	19.7		12D	-N		P	0841	.89	1.00			E

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1974 AUG	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP61006	21	0914	0940	0923	N05	E58	.845	13168	25.7	26	-N				1.38				3 3 3 7
TEHR	21	0912E	0944	0923	N04	E59	.855	13168	25.8	32D	-F	3	C		1.37				DE
ABST	21	0915	09330	0921	N06	E55	.815	13168	25.5	18D	-N		P	0921	.90	1.60		664	DJ
MONT	21	0916	0935	0925	N04	E59	.855	13168	25.8	19	-N		C	0925	1.86				
GRP61008	21	1018	1028	1021	S11	W23	.486	13175	19.7	10	--F				.38				2 2 2 6
MONT	21	1017	1022	1019	S11	W24	.498	13175	19.6	5	-F		C	1019	.21				
TEHR	21	1018	1034	1022	S10	W22	.464	13175	19.8	16	-F	2	C		.55				DE
GRP61009	21	1218	1237	1223	N02	E48	.744	13168	25.1	19	--N				.36				6 6 5 8
TEHR	21	1215	1235	1222	N04	E50	.764	13168	25.3	20	-F	3	C		.64				F
RAMY	21	1216E	1245	1225U	N03	E48	.743	13168	25.1	29D	-N	3	C		.31				DE
MCMA	21	1216	1232	1222	N01	E49	.757	13168	25.2	16	-N		C	1222	.21	.30			D
CATA	21	1220	1240	1220	N02	E48	.744	13168	25.1	20	-N	3		1220	.29	.43		(195)	
WEND	21	1221	1235		N01	E48	.746	13168	25.1	14	-N								
ATHN	21	1222E	1232	1224	N01	E46	.722	13168	25.0	10D	-F	1		1224	.34	.41			
GRP61011	21	1302	1334	1308	S11	W26	.522	13175	19.6	32	--F				.64				5 4 4 10
MCMA	21	1302	1335	1307	S12	W26	.530	13175	19.6	33	-F		C	1307	.52	.60			E
ZURI	21	1302	1330	1307	S10	W28	.539	13175	19.4	28	-F		C	1307	.85	1.00			
BOUL	21	1303	1342	1312	S12	W26	.530	13175	19.6	39	-F		C	1312	.86	.95			
ATHN	21	1305E	1321	1306	S10	W23	.477	13175	19.8	16D	-F	1		1306	.34	.33			
WEND	21	1315	1342		S11	W28	.546	13175	19.5	27	1F		V		3.09				
GRP61012	21	1614	1637	1618	S12	W28	.554	13175	19.6	23	--B				.77				4 4 4 5
BOUL	21	1613	1657	1618	S11	W26	.522	13175	19.7	44	-N		C	1618	1.39	1.55			
MCMA	21	1614	1630	1617	S12	W28	.554	13175	19.6	16	-B		C	1617	.77	.80			
RAMY	21	1614	1635	1618	S12	W27	.542	13175	19.7	21	-B	3	C		.41				DE
MEUD	21	1615	1625	1617	S11	W29	.559	13175	19.5	10	-N		C	1617	.52	.60			D
	21	2220	2253	NO FLARE PATROL															
GRP61014	22	0431	0505	0438	S12	W36	.649	13175	19.5	34	--F				.83				2 2 2 5
PALE	22	0431	0505	0434U	S12	W36	.649	13175	19.5	34	-F	1	C		.83				F
MANI	22	0441E	0505	0442	S12	W36	.649	13175	19.5	24D	-N	1		0442	.82	1.09			
GRP61015	22	0614	0714	0620	S12	W36	.649	13175	19.6	60	-N				.95				3 3 3 5
MANI	22	0612	0647	0620	S13	W38	.678	13175	19.4	35	-N	2		0620	.93	1.25			F
BUCA	22	0615	0740		S12	W37	.661	13175	19.5	85	-N		C	0621	1.10	1.50			
TEHR	22	0615E	0642D	0620	S12	W34	.626	13175	19.7	27D	-N	4	C		.83				DE
GRP61021	22	1022	1038	1028	S12	W37	.661	13175	19.7	16	-N				.78				4 3 3 7
MEUD	22	1020	1045		S11	W39	.679	13175	19.5	25	-F		C	1025	.83	1.10			E
TEHR	22	1023	1033	1026	S11	W33	.608	13175	20.0	10	-N	4	C		.25				DE
UPIC	22	1025E	1035E	1030	S13	W39	.689	13175	19.5	10D	-N		P	1030	1.26				
RAMY	22	1037E	1053	1041U	S14	W38	.684	13175	19.6	16D	-N	3	C		.31				DE
GRP61022	22	1747	1806	1753	S12	W44	.739	13175	19.4	19	--F				.51				2 2 2 6
BOUL	22	1747	1801	1752	S13	W45	.754	13175	19.4	14	-F		C	1752	.75	1.05			
PALE	22	1749E	1811	1753U	S12	W45	.750	13175	19.4	22D	-F	3	C		.27				
BOUL	22	1755	1823	1759	S12	W41	.706	13175	19.7	28	-F		C	1759	.43	.57			
GRP61024	22	1941	2000	1945	S11	W45	.746	13175	19.4	19	--F				.32				2 2 2 2
BOUL	22	1940	2007	1946	S10	W43	.720	13175	19.6	27	-F		C	1946	.32	.44			
MCMA	22	1941	1953	1944	S11	W46	.757	13175	19.4	12	-N		C	1944	.31	.50			D
	22	2051	2100	NO FLARE PATROL															
	22	2104	2120	NO FLARE PATROL															
025 BOUL	22	2148	2158	2150	S10	W46	.753	13175	19.5	10	--F		C	2150	.21	.31			2
	22	2223	2239	NO FLARE PATROL															
	22	2243	2248	NO FLARE PATROL															
026 PALE	22	2338	2340D	2339U	N04	E36	.587	13168	25.7	2D	--F	2	C		.62				DE 3
029 TEHR	23	0817E	0827D	0818U	S12	W46	.761	13175	19.9	18D	--F	4	C		.21				F 3
031 BOUL	23	2119	2140	2124	S10	W49	.784	13151	20.2	21	--F		C	2124	.54	.81			1
032 TEHR	24	0314	0322	0316	S14	W59	.885	13175	19.7	8	--F	3	C		.41				3
GRP61034	24	1510	1531	1518	S09	W71	.954	13175	19.3	21	-N				.45				2 2 2 4
BOUL	24	1510	1527	1516	S09	W70	.949	13175	19.4	17	-F		C	1516	.32	.87			
BOUL	24	1511	1535	1517	S09	W68	.937	13175	19.5	24	-F		C	1517	.32	.83			
CATA	24	1520E	1525D	1520	S09	W72	.959	13175	19.2	5D	-B	3		1520	.58			(251)	

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	DATE AUG	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP61035	24	1740	1836	1745	N03	E11	.202	13168	25.6	56	-N				1.37				4 4 4 4
PALE	24	1738	1811	1744	N02	E11	.209	13168	25.6	33	-N	3	C		1.63				U F
BOUL	24	1739	1900	1745	N02	E12	.224	13168	25.6	81	-N		C	1745	1.71	1.75			
MCMA	24	1748	1806D	1745	N02	E11	.209	13168	25.6	260	-N		C	1745	1.29	1.30			E
HUAN	24	1741	1751D		N04	E11	.197	13168	25.6	100	-N	1	P	1747	.83	.85			E
	25	0442	0505	NO FLARE PATROL															
	25	0510	0531	NO FLARE PATROL															
	25	1954	2001	NO FLARE PATROL															
	25	2013	2014	NO FLARE PATROL															
	25	2018	2029	NO FLARE PATROL															
	25	2036	2039	NO FLARE PATROL															
	25	2056	2059	NO FLARE PATROL															
	26	0200	0250	NO FLARE PATROL															
	26	0400	0408	NO FLARE PATROL															
037 ABST	26	0452	0613D	0554	S10	W90	1.000	13175	19.5	810	1F		P	0554	.81				ADGK 2
038 BOUL	26	1555	1617	1559	N02	W18	.320	13168	25.3	22	--F		C	1559	.11	.11			3
	26	2104	2114	NO FLARE PATROL															
	28	2125	2202	NO FLARE PATROL															
	28	2208	2224	NO FLARE PATROL															
	28	2305	2312	NO FLARE PATROL															
	29	0116	0125	NO FLARE PATROL															
	29	0200	0206	NO FLARE PATROL															
	29	0211	0219	NO FLARE PATROL															
	29	2125	2131	NO FLARE PATROL															
	29	2137	2152	NO FLARE PATROL															

A = Eruptive prominence whose base is less than 90° from central meridian.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No visible spots in the neighborhood.
H = Flare accompanied by a high speed dark filament.
I = Active region very extended.
J = Distinct variations of plage intensity before or after the flare.
K = Several intensity maxima.
L = Existing filaments show signs of sudden activity.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the calcium II lines H and K.
P = Flare shows helium D_3 in emission.
Q = Flare shows the Balmer continuum in emission.
R = Marked asymmetry in Hα line suggests ejection of high velocity material.
S = Brightness follows disappearance of filament (same position).
T = Region active all day.
U = Two bright branches, parallel (||) or converging (Y).
V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important intensity increase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide Hα line.
Y = System of loop-type prominences.
Z = Major sunspot umbra covered by flare.

Note:
A line of explanation has been added before each flare event having more than one maxima. The total number of stations reporting some part of the event is given. The number of stations observing at the time of the principal maximum but not reporting the event is given in the second statement. Care should be exercised in utilizing the numbers in the remarks column. The first number is the number of stations reporting the individual maximum, and not the total number of stations reporting some part of the flare event. The last number is the number of stations reporting at the time of the individual maximum and not necessarily the total number of stations observing during the flare event. GRP numbers may appear several times in order to indicate secondary maxima. An asterisk beside an importance indicates a secondary maximum. The word "GRP" has also been omitted to aid in pointing to this condition.
When it is impossible to determine the time of Maximum Phase from the individual reports the time of Area Measurements is used. This time appears in parentheses. For Flares reported by only one station the last 3 digits of the group number appear to the left of the statio.. code.

Hα SOLAR FLARES
Unconfirmed
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OBSERV-ATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE AUG	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
858 MONT	01	0830	0846	0834	S08	W38	.647	13095	26.5	16	-N		C	0834	.62				8
859 BOUL	01	1602	1623	1609	S14	W68	.941	13084	24.6	21	-F		C	1611	.21	.54			4
860 BOUL	01	1619	1707	1646	S10	W75	.972	13084	24.1	48	-F		C	1646	.11	.32			4
867 CATA	02	1530	1545	1530	S11	W55	.841	13095	26.5	15	-N	3		1530	.29	.53		(178)	6
870 TEHR	03	1133	1146	1135	S05	W85	.997	13084	25.1	13	-F	2	C		.19				F 4
871 BOUL	03	1705	1738	1716	S10	W70	.948	13095	26.5	33	-F		C	1715	.21	.58			5
875 RAMY	03	2117E	2137	2121U	S09	W70	.947	13095	26.6	20D	-N	4	C		.41				DE 4
876 PALE	04	0248E	0254	0248U	S08	W75	.971	13095	26.5	6D	-F	3	C		.26				DE 5
878 UPIC	04	0905U	0930	0915	S09	W85	.998	13095	26.0	25D	-F		P	0915	.21				5
879 UPIC	04	0955	1015		S09	W86	.999	13095	26.0	20	-F		P	1010	.21				4
881 BOUL	04	1355	1359	1357	S10	W89	1.000	13095	25.9	4	-F		C	1357	.11	.42			5
884 HUAN	04	2019	2022	2022U	S09	W88	1.000	13095	26.2	3	-F	1	C						4
887 MONT	05	0715	0729	0719	S09	W90	1.000	13095	26.6	14	-F		C	0719	.21				5
889 MONT	05	0936	0943	0940	S09	W90	1.000	13095	26.6	7	-F		C	0943	.41				7
890 MONT	05	0949	0956	0953	S09	W90	1.000	13095	26.7	7	-F		C	0953	.21				7
891 MONT	05	1043	1055	1045	S19	E90	1.001	13127	12.2	12	-F		C	1045	.21				9
895 MONT	06	0924	0938	0927	S11	E90	1.000	13128	13.1	14	-F		C	0927	.21				6
896 HUAN	06	1257E	1259D		S21	E88	1.000	13127	13.1	2D	-F	1	P						8
900 UPIC	07	1211	1235		S07	E55	.833	13124	11.6	24	-F		P	1220	.42				10
*GRP60901	07	1354	1400	1355	S07	E54	.824	13124	11.6	6	-N				.77				7 7 7 10
RAMY	07	1353	1400	1355	S07	E55	.833	13124	11.7	7	-N	4	C		.46				DE
TEHR	07	1353	1359	1355	S06	E54	.822	13124	11.6	6	-N	4	C		.45				F
BOUL	07	1353	1403	1355	S07	E52	.804	13124	11.5	10	-N		C	1355	.54	.86			
MCMA	07	1353	1359	1355	S07	E53	.814	13124	11.6	6	-N		C	1355	.31	.50			E
ZURI	07	1353	1357	1354	S07	E52	.804	13124	11.5	4	-F		C	1354	.53	.90			
CATA	07	1355	1400	1355	S04	E54	.818	13124	11.6	5	-B	3		1355	.58	1.00		(229)	
HURB	07	1355E	1403D	1355	S08	E56	.845	13124	11.8	8D	-N				2.50				
904 BOUL	08	1551	1559	1553	S09	E24	.475	13124	10.5	8	-F		V	1553		.30			3
906 TACH	09	0432	0449	0439	S11	W34	.616	13120	6.6	17	1N		C	0439	2.73	3.55		63	E 3
907 ATHN	09	0647	0700	0653	S11	E17	.410	13124	10.6	13	-F	1		0653	.34	.33			3
916 RAMY	10	1448	1506	1450U	N07	E68	.924	13139	15.7	18	-F	3	C		.46				4
918 HUAN	10	1825E	1827D		S07	E38	.645	13136	13.6	2D	-F	1	P	1826	.31	.41			C 3
GRP60921	11	1100	1310	1216	S06	E27	.495	13136	13.5	130	1N				3.97				2 1 1 5
KHAR	11	1100E	1310D		S06	E27	.495	13136	13.5	130D	1N			1103	3.97	4.60			EKS
RAMY	11	1210	1225	1216	S06	E27	.495	13136	13.5	15	-F	2	C		.37				DE
922 TEHR	11	1244	1315	1254	S07	W02	.235	13124	11.4	31	-N	3	C		.31				DE S 6
923 BOUL	11	1443	1451	1444	N08	E58	.844	13139	16.0	8	-F		V	1444		1.10			6
925 ARCE	12	0931E	0959		S07	E16	.357	13136	13.6	28D	-N		C	0936	1.13	1.20			5
926 MONT	12	1031E	1037	1033	S18	E17	.495	13147	13.7	6D	-F		C	1033	.41				5
927 ABST	13	0625	0640	0628	S07	W05	.249	13128	12.9	15	-F		C	0628	.90	.90		64	DJL 5
GRP60928	13	0801	0845	0808	S03	W09	.227	13152	12.7	44	-F				1.06				2 2 2 8
ARCE	13	0800E	0845D		S02	W10	.227	13152	12.6	45D	-F		C	0810	1.21	1.20			
ABST	13	0801	0808D	0808	S04	W08	.229	13152	12.7	7D	-F		P	0808	.90	.90		62	DJ
929 WEND	13	1518	1530		S04	W07	.219	13136	13.1	12	-N								8

* Should be in "confirmed" list.

Hα SOLAR FLARES
Unconfirmed
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OBSERV-ATORY	OBSERVED UT				LOCATION						DURA-TION	IM-POR-TANCE	OBS.		MEASUREMENTS					REMARKS
	DATE 1974 AUG	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	NOAA/TH PLAGE REGION	CMP DAY		MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
GRP60930	13	1609	1620	1611	S06	W12	.298	13128	12.8		11	-F				.37				2 2 1 7
RAMY	13	1607	1621	1611	S07	W12	.310	13128	12.8		14	-F	3	C		.37				DE
WEND	13	1611	1618		S05	W12	.286	13128	12.8		7	-F								
931 PALE	13	2321E	2330D	2323	S08	W44	.722	13124	10.7		90	-N	3	C		.30				5
GRP60932	14	0238	0244	0238	S04	W11	.263	13136	13.3		6	-F				.21				1 1 1 4
PALE	14	0236E	0244	0238U	S04	W09	.240	13136	13.4		6D	-F	2	V		.21				
PALE	14	0239E	0244	0239U	S04	W14	.301	13136	13.1		5D	-F	2	C		.19				
935 UPIC	15	1121E	1130		S04	W29	.513	13136	13.3		9D	-N		P	1126	.85				10
936 TEHR	15	1234	1258	1246	N09	W03	.066	13139	15.3		24	-F	2	C		.64				DE 8
938 TEHR	15	1412	1422	1414	S03	W18	.348	13141	14.2		10	-N	2	C		.64				DE 6
939 MEUO	15	1657	1708	1700	N08	W13	.224	13141	14.7		11	-F		C	1700	.31	.30			D 5
940 BOUL	15	1849	1920	1853	N09	W14	.243	13141	14.7		31	-F		C	1853	.32	.33			4
942 WEND	16	0522	0529		N10	W19	.327	13141	14.8		7	-N								4
943 ABST	16	0701E	0728D	0712	N10	W21	.359	13141	14.7		27D	-F		P	0712	.90	1.90			DJ 6
945 TEHR	16	0757E	0802	0758	S12	E15	.405	13160	17.5		5D	-N	4	C		.50				F 5
GRP60946	16	0804	0905	0816	N09	W23	.389	13141	14.6		61	1N				1.96				2 1 1 6
ARCE	16	0804E	0905D		N09	W23	.389	13141	14.6		61D	1N		P	0804	1.96	2.20			HK
UPIC	16	0810U	0825	0816U	N09	W25	.421	13141	14.5		15D	-N		P	0816	.42				
947 UPIC	16	1020U	1045	1025	S11	E45	.745	13175	19.8		25D	-N		P	1025	1.05				6
949 MCMA	16	1214E	1315		N08	W27	.451	13141	14.5		61D	-N		C	1250	.83	.90			EL 9
GRP60950	16	1231	1238	1232	S19	W52	.841	13127	12.6		7	-F				.48				2 2 2 7
RAMY	16	1231E	1241D	1231U	S20	W53	.853	13127	12.5		10D	-N	3	C		.28				DE
ATHN	16	1231	1234	1233	S18	W51	.829	13127	12.7		3	-F	1		1233	.68	.90			
955 HUAN	16	1829	1837	1831	N09	W27	.452	13141	14.7		8	-F	2	C	1831	.21	.23			D 6
959 BOUL	16	2020	2033	2024U	S16	W44	.756	13147	13.5		13	-F		C	2024	.32	.45			4
962 PALE	17	0257E	0258D	0258U	S05	W33	.573	13141	14.6		1D	-F	1	C		.55				DE H 4
964 PALE	17	0437E	0451D	0440	S11	E01	.305	13148	17.3		14D	-F	1	C		.52				DE 5
965 ARCE	17	0800E	0803D		S18	W50	.821	13147	13.6		3D	-F		P	0800	.69	1.20			6
968 TEHR	17	1018E	1048	1018U	S11	E31	.582	13175	19.8		30D	-F	4	C		.64				F 5
970 MEUO	17	1328	1405		S19	W53	.850	13147	13.6		37	-F		C	1330	.41	.80			OK 8
971 RAMY	17	1333	1345	1335	S15	E39	.699	13151	20.5		12	-F	4	C		.21				DE H 8
972 BOUL	17	1430	1452	1436	S05	W59	.866	13136	13.2		22	-F		C	1436	.32	.63			7
973 HUAN	17	1610E	1614		S16	W57	.873	13147	13.4		4D	-F	1	P						5
974 PALE	17	1711E	1727	1712U	S12	W83	.996	13124	11.5		16D	-F	2	C		.41				5
976 BOUL	17	1824	1843	1828	S06	W73	.961	13152	12.3		19	-F		C	1828	.21	.61			5
981 TEHR	18	0459	0505	0502	S07	W66	.922	13136	13.3		6	-F	4	C		.25				DE 4
982 TEHR	18	0904	0920	0910	N09	W48	.738	13141	14.8		16	-F	4	C		.33				F 5
GRP60984	18	1111	1212	1139	N13	W52	.783	13141	14.6		61	-F				.44				2 2 2 8
TEHR	18	1111	1210	1137	N12	W48	.738	13141	14.9		59	-F	4	C		.25				
KHAR	18	1114E	1213D	1140	N13	W56	.823	13141	14.3		59D	-F		C	1140	.62	1.00			D
987 ABST	19	0730	0748	0733	S10	W89	1.000	13128	12.6		18	1F		C	0733	1.35				ADG 7
988 TEHR	19	0742	0756	0745	S11	E87	1.000	13170	25.8		14	-N	4	C		.17				F 6
990 KHAR	19	0953E	1010D	0955	S16	W90	1.001	13136	12.7		17D	2N		C						7
GRP60991	19	1054	1105	1056	S11	W88	1.000	13136	12.9		11	2F				.21				2 2 1 8
KHAR	19	1054E	1105D	1056	S16	W90	1.001	13136	12.7		11D	2F		C						D
TEHR	19	1055	1107	1058U	S06	W85	.997	13136	13.1		12	-F	4	C		.21				

Hα SOLAR FLARES
Unconfirmed
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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE AUG	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
992 MEUD	19	1418	1422	1418	S16	E03	.391	13151	19.8	4	-F		C	1418	.31	.30			E 8
993 HUAN	19	1913E	1918D		S11	W88	1.000	13147	13.2	5D	-F	1	P						4
994 TEHR	20	0309	0325	0315	N11	E58	.842	13166	24.5	16	-N	4	C		.83				5
996 MEUD	20	1102	1120	1110	N12	W85	.994	13141	14.1	18	-N		C	1110	.21				D 6
997 MEUD	20	1142	1152	1145	S05	W90	1.000	13136	13.7	10	-N		C	1145	.31				8
998 HUAN	20	1309	1321	1314U	S13	W88	1.000	13147	13.9	12	-F	2	C						8
999 HUAN	20	1503	1508	1506U	N13	W88	.998	13141	14.0	5	-F	2	C						4
000 RAMY	20	1838	1858	1841	N03	E59	.856	13168	25.2	20	-F	4	C		.37				DE 5
001 TEHR	21	0352	0405	0354	N04	E59	.855	13168	25.6	13	-N	3	C		.28				DE 4
002 TEHR	21	0617E	0630	0620	S10	W20	.440	13175	19.8	13D	-N	3	C		.55				DE 5
007 TEHR	21	0941E	0956	0945	S12	W18	.439	13151	20.1	15D	-N	4	V		.66				U F 6
010 TEHR	21	1258	1334	1305	S10	W22	.464	13175	19.9	36	-N	2	C		.55				F 10
013 HCMA	21	1727	1734	1729	N01	E47	.734	13168	25.3	7	-F		C	1729	.26	.40			D 7
GRP61016	22	0659	0708	0704	S13	W38	.678	13175	19.4	9	-F				.70				2 2 2 7
MANI	22	0659	0708	0704	S13	W38	.678	13175	19.4	9	-F	2		0704	.41	.56			
ABST	22	0659	0705D	0703	S12	W38	.673	13175	19.4	6D	-N		P	0703	.99	1.30			D
017 TEHR	22	0805E	0820D	0810	S11	W33	.608	13175	19.9	15D	-N	4	C		.41				DE 7
018 TEHR	22	0834E	0841	0836	S11	W33	.608	13175	19.9	7D	-N	4	C		.33				DE 7
019 TEHR	22	0956E	1006	1001	S11	W33	.608	13175	19.9	10D	-F	4	C		.25				DE 6
020 TEHR	22	1814E	1825	1019	N13	E29	.488	13166	24.6	11D	-N	4	C		.41				5
023 BOUL	22	1751	1820	1759	N01	E37	.607	13168	25.5	29	-F		C	1759	.21	.27			4
027 MANI	23	0225	0236D	0229U	S13	W48	.785	13175	19.5	11D	-F	2		0229	.52	.79			F 4
028 MANI	23	0340E	0348E	0343U	S13	W48	.785	13175	19.6	8D	-F	2		0343	.52	.79			F 7
030 ARCE	23	0845E	0855D		S11	W51	.807	13175	19.5	10D	-F		C	0845	.44	.70			B 6
033 BOUL	24	1352	1411	1356	S09	W68	.937	13175	19.5	19	-F		C	1356	.21	.55			6
036 BOUL	25	2103	2121	2106	S08	E14	.350	13174	26.9	18	-F		V	2106		.52			3
039 BOUL	26	1741	1750	1747	S19	W35	.685	13165	24.1	9	-F		C	1747	.11	.13			6
040 ATHN	27	1304E	1307	1305	S01	W26	.457	13168	25.6	3D	-F	1		1305	.68	.68			5
041 ABST	29	0531E	0604	0552	S26	W30	.696	13174	27.0	33D	1F		P	0552	1.80	2.40			FG 5
042 ABST	29	0552E	0632D	0622	N07	W27	.451	13194	27.2	40D	-F		P	0622	.90	1.00			DJ 4
043 ABST	30	0534E	0608D	0550	N08	W40	.638	13194	27.2	34D	-F		P	0550	.90	1.40			DGJK 4

In the importance column "--" signifies the subflare has been confirmed by the NOAA grouping program but is not included in the I.A.U. Quarterly Bulletin on Solar Activity. These subflares are also not included in the Flare Index below.

DAILY FLARE INDICES

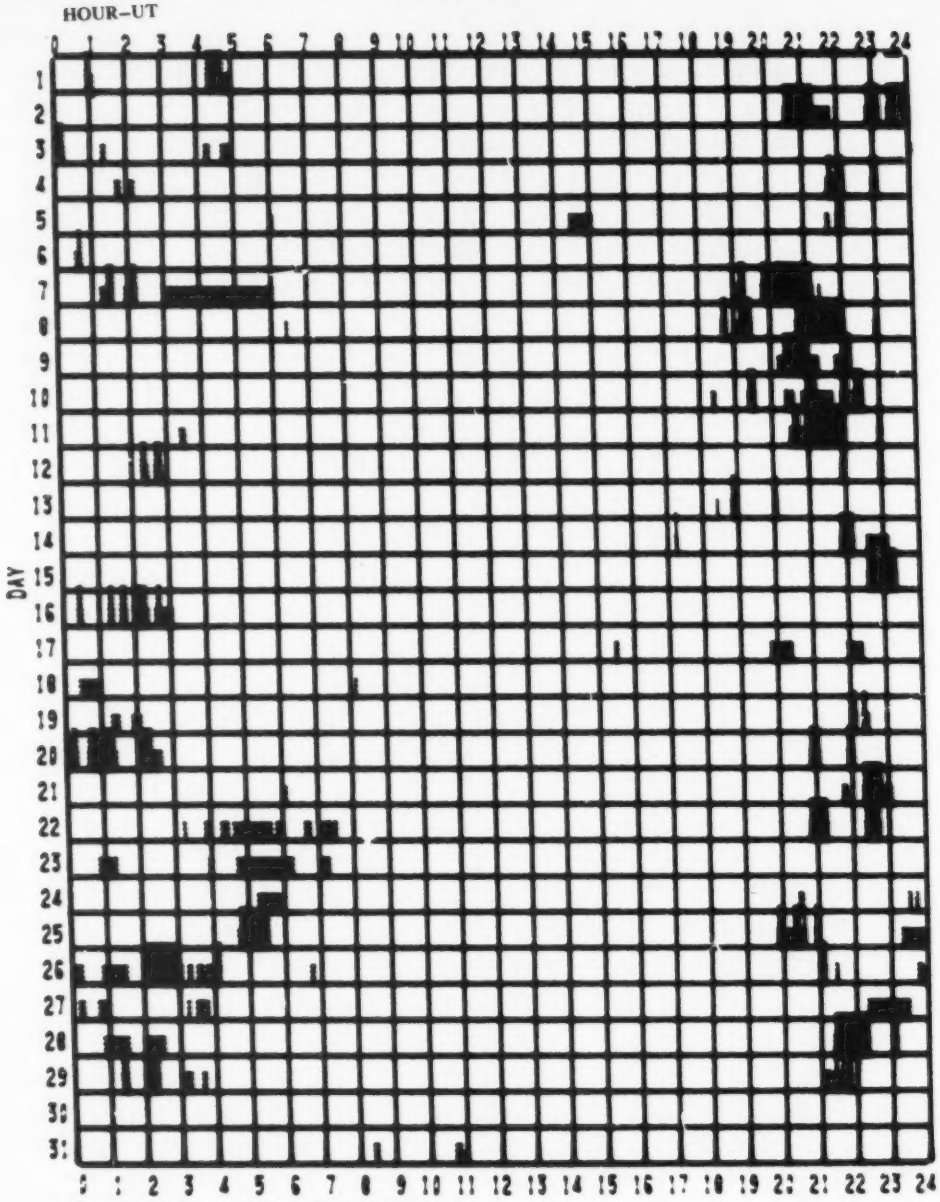
Date	Flare Index	HR OBS	Date	Flare Index	HR OBS	Date	Flare Index	HR OBS
740801	20.89	23.5	740810	0.00	23.1	740820	0.51	22.6
740802	2.44	22.1	740811	0.00	22.6	740821	24.37	23.5
740803	4.39	24.0	740812	0.00	23.5	740822	7.97	23.2
740804	3.13	23.5	740813	0.00	23.8	740824	10.97	24.0
740805	0.00	23.9	740814	0.00	23.5	740825	0.00	22.9
740806	5.38	23.9	740815	0.00	23.2	740826	3.46	22.9
740807	2.22	22.1	740816	4.87	23.2	740828	0.00	23.0
740808	0.00	22.0	740817	28.93	24.0	740829	0.00	23.3
740809	19.35	23.1	740819	0.00	23.7			

When no Flare Index is given, it is 0 for that day.

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

AUGUST 1974



Observatories included in total patrol:

Abastumani	Catania	Kharkov	McMath-Hulbert	Tachkent
Arcetri	Culgoora	Kiev	Meudon	Teheran
Athenes	Herstmonceux	Kodaikanal	Mitaka	Upice
Boulder	Huancayo	Locarno	Palehua	Voroshilov
Bucharest	Hurbanovo	Manila	Ramey	Wendelstein
				Zürich

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

SOLAR RADIO EMISSION
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AUG 1974	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
1	536	ONDR	45	0727.5	0731	5	65.0			
	18	MCMA	6	1614	1616	10			1	
	2800	OTTA	24	1820	1900	40	1.2	0.6		
	2800	OTTA	24	1900		420 D	1.2			
	8800	PALE	22	2007.9	2023.8	22.3	11.6	6.9		
	10700	PENN	20	2011.5	2020.1	44.9	6.4	3.4		
	1420	BOUL	45	2011.5	2026	12.5	20.0	7.0		
	606	SGMR	46	2011	2013.6	14	40.0	16.2		
	606	SGMR	46		2014.4		40.5			
	2800	OTTA	4	2012	2015.2	11	19.8	7.2		
	2700	PENN	45	2012.5	2015.4	10.6	19.0	7.8		
	2695	BOUL	45	2012.5	2016.5	12	19.0	5.0		
	1415	PALE	4	2012	2015.2	14.8	31.6	9.5		
	1415	SGMR	4	2012.4	2015.2	10.7	31.4	12.6		
	960	PENN	45	2012.5	2015.4	7.5	12.8	5.1		
	245	SGMR	6	2012.1	2015	14.3	16.9	6.8		
	410	SGMR	6	2013.2	2015.2	8.5	32.4	13.0		
	960	PENN	29	2020	2020	30.2	2.2	1.1		
	2800	OTTA	29	2023	2023	130	5.0	2.8		
	2700	PENN	29	2023.1	2023.1	128	4.7	2.4		
	18	MCMA	41	2148	2151	10			1	
	18	MCMA	41	2206	2220	16			1	
	18	MCMA	41	2229	2233	10			1	
	2800	OTTA	27	2240		150	1.6	1.4		
	2800	OTTA	24	2240	2250	10	1.6	0.8		
	9400	TYKW	5	2241	2250	30	3.0	1.0		
	2700	PENN	1	2241	2244.6	6.6	3.8	1.7		
	2695	BOUL	45	2242.5	2246.5	5	6.0	2.0		
	2000	TYKW	5	2242	2245.2	6	3.0	1.0		
	1000	TYKW	45	2242	2245.2	5	17.0	3.0		
	960	PENN	45	2242.4	2245.4	3.4	7.8	2.0		
	3750	TYKW	5	2243	2245	25	3.0	1.0		
	2800	OTTA	2	2243	2245	6				
	1420	BOUL	8	2243	2245	4	8.0	3.0		
	1415	SGMR	3	2243.7	2245.3	4.1	10.2	2.0		
	1415	MANI	4	2243.9	2245.3	2.6	11.7	4.1		
	2695	PENT	24	2250		110	1.6			
	2695	PENT	26	2440	2510	30	-1.6	-0.8		
2	100	HIRA	45	0836.5	0840	5.5	1000.0D	70.0D		
	4995	BOUL	3	1742.5	1744.5	3	8.0	3.0		
	2695	BOUL	3	1744	1745.5	2.5	3.0	1.0		
	1415	SGMR	1	2014.3	2014.5	.4	1.5	.4		
	606	SGMR	1	2014.3	2014.5	.6	2.4	.7		
	410	SGMR	6	2014.3	2014.9	.9	3.0	.6		
	245	SGMR	6	2014.2	2014.9	1.8	2.6	.5		
	606	SGMR	1	2030.6	2030.9	.5	3.5	1.1		
	410	SGMR	6	2030.6	2030.9	.7	2.6	.5		
	245	SGMR	6	2030.5	2030.9	1	2.3	.5		
	18	MCMA	41	2200	2205	7			1	
	18	MCMA	41	2216	2221	17			1	
3	260	ONDR	44	0620	0640.5	90	35.0			
	260	ONDR	41	0750	1355	442	20.0			
	2695	PENT	24	1745	1915	90	1.8	0.9		
	2695	PENT	24	1915		220 D	1.8			
4	260	ONDR	44	0646	1427	509	45.0			
	9100	GORK	20	0837	0936	113	5.9	2.7		
	245	SGMR	44	0942 E	1034.3	318 D	34.6			
	188	KIEV	42	1342.5		68	75.0	10.0		
	18	MCMA	6	1548	1550	3			1	
	2595	PENT	20	1940	2145	200 D	2.4			
	2700	PENN	8	2027.6	2027.7	.5	3.8			
	960	PENN	8	2027.2	2027.6	.9	45.9			
5	260	ONDR	44	0643	0900	503	25.0			
	18	BOUL	6	2005	2009	5			1	
6	260	ONDR	44	0645	1309	501	25.0			
	18	MCMA	6	2210	2212	3			1	
	18	MCMA	41	2259	2311	18			2	
	18	MCMA	41	2329	2400	34			1	
7	260	ONDR	41	0800	1157	430	25.0			
	188	KIEV	42	1202.5	1218	180	175.0	13.0		
	2700	PENN	8	1213.6	1213.7	.3	1.9			
	960	PENN	8	1213.6	1213.7	.2	9.0			
	245	SGMR	43	1530.2	2106.6	501.8D	14.2			
	930	BORD		1706	1707.2	2	14.0	2.0		
	18	BOUL	6	1735	1738	5			1	
	245	SGMR	6	1736.1	1737.7	5.2	94.6	28.4		
	18	MCMA	6	1739	1741	4			1	
	2800	OTTA	8	1847.8	1847.8		2.2			
8	200	HIRA	45	0458	0458.8	1	120.0	20.0		
	260	ONDR	44	0638	1316	532	130.0			
	245	SGMR	44	0946 E	1230.5	845 D	86.6			
	234	POTS	45	1230.4	1230.4	.2	250.0	15.0		
	2800	OTTA	27	1415 E		295 D	2.0			

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AUG 1974	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
	2800	OTTA	24	1415 E	1455	40 D	2.0			
	2800	OTTA	24	1455		190	2.0			
	188	KIEV	41	1523	1552	30.5	210.0D			
	245	SGMR	6	1551.6	1552	1.1	147.0	44.1		
	606	SGMR	1	1552.1	1552.3	.4	1.9	.8		
	410	SGMR	6	1552.1	1552.2	.3	7.5	1.5		
	29	UPIC	45	1552	1553	2				
	18	MCMA	6	1555	1556	2			1	
	29	UPIC	45	1625	1628.5	5				
	2800	OTTA	26	1805	1910	65	-1.4	-0.7		
	18	BOUL	6	2045	2047	3			1	
	18	MCMA	6	2047	2048	3			1	
	1415	PALE	22	2338.6	2342.6	13.7	15.6	10.0		
9	1415	PALE	4	0002	0004.6	7.3	13.5	3.9		
	100	HIRA	45	0138	0138.7	1	370.0	70.0		
	200	HIRA	45	0338.5	0339.5	1.5	180.0D	60.0D		
	100	HIRA	45	0338.5	0339.4	1.5	430.0	100.0		
	100	GORK	6	0415.7	0416.4	20.5	60.0			
	100	GORK		0415.7	0418.2		60.0D			
	100	GORK		0415.7	0421		60.0D			
	100	GORK		0415.7	0422.8U		60.0D			
	100	GORK		0415.7	0428.6		60.0D			
	100	GORK		0415.7	0429.4		60.0D			
	100	GORK		0415.7	0435.1		60.0D			
	200	GORK	6	0422.2	0422.7U	.7	100.0			
	100	HIRA	45	0422.4	0422.7	1	1000.0D	300.0D		
	200	HIRA	45	0445	0445.5	2.5	180.0D	50.0D		
	200	GORK	41	0445.2	0446 U	11.3	100.0D			
	200	GORK		0445.2	0455.6		100.0			
	100	HIRA	45	0445.2	0445.6	2	800.0	200.0		
	100	GORK	48	0445.2	0446	2.2	70.0D			
	200	HIRA	45	0455	0455	1	170.0	50.0		
	100	GORK	6	0455.2	0455.6	.8	60.0D			
	100	HIRA	41	0516.5	0517.9	8.5	1000.0D			
	100	GORK	41	0516.3	0516.7	9	80.0			
	100	GORK		0516.3	0518.1U		80.0D			
	100	GORK		0516.3	0519.3		80.0			
	100	GORK		0516.3	0521.1		80.0			
	100	GORK		0516.3	0523.1		80.0D			
	100	GORK		0516.3	0524.3		80.0			
	200	HIRA	45	0517.5	0518 U	3	180.0D	50.0D		
	200	GORK	41	0517.6	0518 U	3.3	150.0D			
	650	GORK	42	0523.7	0523.7	.3	4.5			
	207	IZMI	41	0609.2	0625.8	42.6	3000.0			
	200	GORK	41	0611.4	0614	20.8	150.0			
	200	GORK		0611.4	0620		70.0			
	200	GORK		0611.4	0626 U		150.0D			
	200	GORK		0611.4	0631.4U		150.0D			
	100	GORK	41	0623.4	0623.5	9	100.0			
	100	GORK		0623.4	0626.2		4500.0			
	100	GORK		0623.4	0629.5		100.0D			
	100	GORK		0623.4	0631.5		1500.0			
	234	POTS	45	0625 U	0625.2	.7U	700.0	70.0		
	207	IZMI	48	0625.4	0625.8	1	3000.0	1000.0		
	200	HIRA	45	0625	0625.8U	1.5	180.0D	100.0D		
	113	POTS	45	0625 U	0625.2	.8U	700.0	150.0		
	100	HIRA	45	0625.8	0626.1	1	950.0	200.0		
	200	HIRA	45	0629	0629	1	120.0	40.0		
	200	HIRA	45	0631	0631.5	1.3	180.0D	50.0D		
	100	HIRA	45	0631	0631.4	1.5	280.0	100.0		
	200	GORK	6	0647.1	0649	2.7	100.0			
	100	GORK	48	0647.5	0649.4	2.2	1500.0			
	100	HIRA	45	0648	0648.3	2.5	130.0	20.0		
	188	KIEV	42	0700 E	0753	450	210.0D	11.0		
	260	ONDR	44	0704	1233.5	479	160.0			
	207	IZMI	6	0731.6	0731.7	.2	40.0			
	221	ABST	44	0749.2	0752.8	240	9.0			
	207	IZMI	41	0749.3	0753.2	20	240.0			
	188	KIEV	48	0749.7	0753.4	13.4	210.0D			
	200	HIRA	45	0751		9				
	200	GORK	41	0751	0755.5	8.5	150.0D			
	200	GORK		0751	0756.2		200.0			
	100	GORK	41	0751	0753.4	9	2000.0			
	100	GORK		0751	0759.5		600.0			
	260	ONDR	45	0752	0753	8	100.0			
	113	POTS	41	0752.9	0754.7	6.4	300.0	5.0		
	100	HIRA	45	0753	0753.4	1	450.0	120.0		
	29	UPIC	45	0753 U	0759.5	7				
	100	HIRA	45	0754.7	0754.8	.6	140.0	50.0		
	650	GORK	22	0829.1	0839.4	20.9	12.0	2.3		
	188	KIEV	48	0833.8	0838.4	7	210.0D			
	207	IZMI	41	0834	0838	6	1800.0			
	200	HIRA	45	0834		6.5				
	200	GORK	41	0834	0838.5	6.2	200.0D			
	200	GORK		0834	0839.2		200.0			
	200	GORK		0834	0840.3		150.0			
	100	HIRA	41	0834	0838.2	7	1000.0			
	100	GORK	41	0834	0834.7	10.6	90.0			
	100	GORK		0834	0835.4		90.0D			

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AUG 1974	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
	100	GORK		0834	0837.4		90.0D			
	100	GORK		0834	0838.4		900.0			
	100	GORK		0834	0840.1		1500.0			
	29	UPIC	45	0834		6.5				
	550	KIEV	41	0835	0838	9.2	59.0			
	113	POTS	40	0835.1	0838	4.9	7000.0	50.0		
	930	BORD		0836	0837.8	3	14.0	2.0		
	606	MANI	40	0836.8	0837.8	2.7	12.4	2.9		
	536	ONDR	45	0836.5	0837.5	3.5	95.0			
	950	GORK	40	0837.5	0839.1	21	6.0			
	808	ONDR	45	0837	0839	3	65.0			
	221	ABST	48	0837.2	0838	3	47.0	16.0		
	234	POTS	40	0838	0838	2.1	500.0	20.0		
	113	POTS	41	0925.6	0934.8	13	1400.0	20.0		
	100	GORK	41	0927.8	0927.9	13	70.0D			
	100	GORK		0927.6	0935.2		70.0D			
	100	GORK		0927.6	0938.7		70.0D			
	100	GORK		0927.6	0940		70.0			
	245	SGMR	44	0947 E	2106	842 D	336.0			
	234	POTS	45	1003.2	1003.2	.1	150.0	30.0		
	113	POTS	5	1007.6	1007.7	.1	200.0	70.0		
	113	POTS	45	1035.7	1035.9	.3	100.0	20.0		
	550	KIEV	41	1045 E	1045.2	9 D	107.0			
	100	GORK	41	1045.7	1046.2	4.3	70.0D			
	100	GORK		1045.7	1049.8		70.0D			
	200	GORK	6	1145	1145.3	.7	200.0	60.0		
	113	POTS	45	1145	1145.1	.2	100.0	20.0		
	260	ONDR	45	1230	1233.5	20	160.0			
	113	POTS	41	1233.5	1236.4	3	800.0	9.0		
	4995	ROUL	3	1743	1744	2.5	8.0	3.0		
	2695	PENT	24	2330	2405	35	1.6	0.8		
	2695	PENT	24	2405		110 D	1.6			
10	260	ONDR	44	0634	1013.5	316	115.0			
	221	ABST	7	0837.8	0838.2	.8	28.0	13.0		
	234	POTS	41	0840.5	0840.6	5.3	120.0	2.0		
	221	ABST	7	0843.5	0844	.5	39.0	16.0		
	536	ONDR	45	0859	0905.5	16	55.0			
	188	KIEV	42	0859		315	36.0	10.0		
	100	GORK	41	0859.1	0900.1	9	50.0			
	100	GORK		0859.1	0901.1		40.0			
	100	GORK		0859.1	0903.5		28.0			
	100	GORK		0859.1	0906.3		40.0			
	808	ONDR	5	0904	0904	.5	55.0			
	221	ABST	44	0932.2	1013.5	90	7.0			
	245	SGMR	44	0949 E	2331.8	839 D	34.4			
	221	ABST	6	1012.8	1013.2	1.2	42.0			
	410	SGMR	6	1013.7	1013.9	2.2	15.8	4.7		
	245	SGMR	6	1013.6	1013.8	1.6	34.9	10.5		
	234	POTS	45	1013.7	1013.8	.5	100.0	20.0		
	207	IZMI	42	1013.8	1013.8	3	2000.0	700.0		
	113	POTS	45	1013.7	1013.9	.7	700.0	150.0		
	29	UPIC	45	1013.5	1015	2.5				
	221	ABST		1052.5	1053	1	23.0	9.0		
	113	POTS	40	1311	1311.3	2	150.0	10.0		
	188	KIEV	7	1617.7	1634	45	40.0			
	2800	OTTA	20	1748	1800	250	2.0	1.1		
	2695	PENT	24	2230	2435	125	4.0	2.1		
	2695	PENT	24	2435		80 D	4.0			
11	100	HIRA	45	0407.5	0408.8	2.5	850.0	200.0		
	260	ONDR	44	0900	1035.5	367	45.0			
	245	SGMR	44	0949 E	2218.2	838 D	434.9			
	200	HIRA	44	2000 E	2245	780 D	28.0	15.0		
	2695	PENT	24	1130	1300	90	3.4	1.7		
	2800	OTTA	24	1300		750 D	3.4			
	2800	OTTA	32	1730	1755	50	-1.0	-0.5		
12	2695	PENT	20	0050	0120	65 D	4.2			
	200	GORK	44	0300		204 E		10.0		
	100	GORK	44	0300		138		5.0		
	100	GORK	6	0629.7	0629.9	.3	30.0	10.0		
	260	ONDR	44	0635	0951	515	90.0			
	200	GORK	44	0651		47		5.0		
	188	KIEV	44	0700 E		540 D	110.0			
	221	ABST	44	0716.8	1010	223.2	7.0			
	188	KIEV		0804.2	0810.6	10.5	210.0			
	100	GORK	44	0835		31		5.0		
	245	SGMR	44	0951 E	2258.4	834 D	111.5			
	202	VORO	44	2100	2125	240		16.0		
	9240	ARCE	22	0956.7	1019.2	75				
	221	ABST		1000.5	1001	1	47.0	26.0		
	221	ABST		1009.5	1010	1	49.0	15.0		
	221	ABST		1024	1024.5	1	36.0	15.0		
	2800	OTTA	27	1150		490	2.4			
	2800	OTTA	24	1150	1240	50	2.4	1.2		
	2800	OTTA	24	1240		310	2.4			
	234	POTS	41	1241.8	1241.9	5.5	175.0	1.0		
	2700	PENN	8	1250.7	1250.8	.2	3.8			
	960	PENN	3	1250.6	1250.9	.7	11.3	3.2		

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AUG 1974	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
	18	MCMA	41	1709	1711	3			1	
	18	MCMA	6	1734	1735	5			1	
	2800	OTTA	26	1800	2000	120	-1.4	-0.7		
	18	MCMA	6	1804	1805	2			1	
	2800	OTTA	20	2120	2220	220	4.2	2.0		
	200	HIRA	45	2124	2124.3	1	180.0D	80.0D		
13	260	ONDR	41	0639	1134	311	45.0			
	188	KIEV	42	0700 E		370	46.0	12.0		
	221	ABST		0744.8	0744.8	1	25.0	8.0		
	245	SGMR	44	0952 E	1134	832 D	105.6			
	202	VORO	44	2100	2218	240		20.0		
14	200	HIRA	43	0152	0250	116	25.0	15.0		
	200	GORK	44	0300		53		10.0		
	100	GORK	44	0300		60		5.0		
	650	GORK	21	0451.7		17.3	5.0			
	650	GORK	41	0452.4	0452.4	.4	15.0	7.0		
	207	IZMI	42	0629.7	0637	2	120.0			
	113	POTS	5	0639.9	0639.9	.1	600.0	200.0		
	188	KIEV	42	0700 E		480 D	63.0	13.0		
	260	ONDR	5	0812.5	0812.5	1	15.0			
	100	GORK	41	0922.4	0952.5	4.5	50.0D			
	100	GORK		0922.4	0954.2		50.0D			
	260	ONDR	5	0952	0952	.5	15.0			
	221	ABST	6	0952	0952.2	.5	38.0			
	207	IZMI	24	0952.5	0952.6	3	600.0	400.0		
	200	GORK	6	0952.4	0952.6	.6	450.0			
	188	KIEV	41	0952.3	0952.7	4.7	290.0			
	113	POTS	45	0952.4	0952.5	.3	2500.0	400.0		
	260	ONDR	5	1029	1029	.5	15.0			
	260	ONDR	45	1103.5	1103.5	4.5	15.0			
	100	GORK	41	1157.6	1157.7	4.3	50.0			
	100	GORK		1157.6	1201.3		50.0D			
	245	SGMR	6	1200.6	1201.2	3.7	31.4	6.3		
	410	SGMR	6	1201.9	1202.2	.4	4.6	1.0		
	260	ONDR	45	1201	1201.5	2	20.0			
	200	GORK	6	1201.1	1201.4	1.5	700.0			
	188	KIEV	6	1201	1201.7	3	290.0D			
	29	UPIC	45	1201.5	1201.5	1.5				
	188	KIEV	6	1214.8	1215.5	1.5	130.0			
	188	KIEV	41	1501	1509	8.7	103.0			
	260	ONDR	45	1506.5	1509.5	2.5	20.0			
	2800	OTTA	20	1703	1735	35	1.2	0.6		
	2700	PENN	8	1858.6	1858.6	.2	23.3			
15	200	GORK	41	0611.4	0611.8	4.8	20.0			
	200	GORK		0611.4	0615		80.0			
	100	GORK	41	0611.4	0611.9	5.2	40.0			
	100	GORK		0611.4	0614.8		50.0D			
	221	ABST	43	0729	0729.8	1.5	16.0	10.0		
	207	IZMI	6	0729.2	0730	1	28.0			
	100	GORK	6	0729.5	0729.6	1.4	50.0D			
	260	ONDR	45	1129	1129.5	2.5	25.0			
	2700	PENN	8	1306.1	1306.1	.4	7.7			
	960	PENN	8	1306	1306.2	.5	11.3			
	260	ONDR	45	1411	1412.5	5.5	15.0			
	18	MCMA	6	1708	1711	4			1	
	410	SGMR	43	2111.7	2255.5	149.3D	19.3			
	245	SGMR	43	2111.7	2310.7	149.3D	18.4			
	202	VORO	44	2250	2308	45		14.0		
16	188	KIEV	42	0720		150	58.0	13.0		
	3100	CRIM	24	0729			3.0			
	260	ONDR	45	0744.5	0745.5	5.5	15.0			
	260	ONDR	41	1152	1225	48	20.0			
	2800	OTTA	24	1427	1440	13	2.0	1.2		
	2800	OTTA	24	1440		410	2.0			
	2695	PENT	24	2130	2500	210	4.6	2.3		
	2695	PENT	24	2500		55 D	4.6			
17	100	GORK	44	0307 E		27 U		5.0		
	100	GORK		0520.7		4.1	200.0D			
	550	KIEV	41	0835.7	0838.6	3.3	93.0			
	260	ONDR	41	1330	1507.5	110	30.0			
	2800	OTTA	26	1520	1800	160	-2.0	-1.0		
	2800	OTTA	1	1608	1609	3	5.4	2.7		
	2700	PENN	1	1608.1	1609.3	3.1	5.8	2.0		
	2695	BOUL	3	1609	1610	2	6.0	2.0		
	18	MCMA	41	1708	1712	5			1	
	1420	BOUL	8	1838.5	1839	1.5	5.0	2.0		
	2800	OTTA	24	1930	1940	10	2.0	1.0		
	2800	OTTA	24	1940		360 D	2.0			
	2800	OTTA	20	2200	2225	110	2.6	1.3		
18	260	ONDR	41	0646	1448	534	40.0			
	3100	CRIM	24	0750			4.0			
	234	POTS	5	0806	0806	.1	700.0	250.0		
	188	KIEV	6	0806	0806.2	1	107.0			
	113	POTS	45	0806	0806	.1	420.0	100.0		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

AUGUST 1974

AUG 1974	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
	245	SGMR	44	0957 E	1602.9	820 D	20.4			
	188	KIEV	42	1435	1603	165	62.0	11.0		
	2800	OTTA	20	1620	1750	180	2.6	1.3		
	18	MCMA	41	2227	2238	34			1	
	200	HIRA	45	2255.5	2256.3U	3.5	180.0D	70.0D		
	100	HIRA	45	2255.5	2256.8U	3	1000.0D	200.0D		
	2800	OTTA	8	2256.6	2256.6		2.0			
	245	SGMR	48	2256	2256.5	2.3	776.9	155.4		
	202	VORO	6	2256	2250	4	85.0			
	18	MCMA	41	2349	2351	13			1	
19	100	GORK	6	0302	0302.2	.7	30.0	20.0		
	260	ONDR	41	0650	0815	330	20.0			
	188	KIEV	41	0816.9	0817	8.2	68.0			
	100	GORK	41	0816.9	0817	7.8	40.0			
	100	GORK		0816.9	0819.8		50.0			
	100	GORK		0816.9	0821.1		50.0			
	1470	BERL	20	0952.5	0959.7	13	4.0			
	9100	GORK	20	0955	0958.5	34	4.3	2.1		
	4995	ATHN	1	0956.3	0958.1	9.2	6.4	1.9		
	3100	CRIM	29	0956	1000	50	5.0	2.0		
	3000	BERL	20	0956	0959.3	34 U	7.3			
	2695	ATHN	1	0956.3	0958.1	8.4	5.3	1.6		
	1415	ATHN	1	0956.3	0957.6	9	7.9	2.4		
	9500	BERL	20	0957	1010	26	5.2			
	536	ONDR	45	0957	0957.5	2	70.0			
	410	SGMR	44	0958 E	1407.8	817 D	35.0			
	245	SGMR	44	0958 E	1348.1	817 D	80.1			
	113	POTS	5	1005.6	1005.7	.1	200.0	70.0		
	9100	GORK	20	1031	1035	9.5	1.8	0.9		
	260	ONDR	44	1220	1417	130	135.0			
	188	KIEV	42	1220		56	37.0	16.0		
	550	KIEV	24	1340	1408.2	33	33.0			
	188	KIEV		1340	1357.8	35	185.0			
	606	SGMR	1	1416.9	1417	.7	5.2	1.0		
	410	SGMR	6	1416.8	1417.5	1.3	21.5	4.3		
	245	SGMR	7	1416.5	1417.6	1.5	407.0	81.3		
	234	POTS	45	1416.6	1417.6	1.2	450.0	10.0		
	188	KIEV	6	1416.5	1417.5	2.4	326.0			
	113	POTS	45	1416.7	1417.3	1.4	800.0	100.0		
	202	VORO	44	2200	0048	300		9.0		
	606	SGMR	3	2054	2054.2	.3	15.9	4.8		
	410	SGMR	6	2054.2	2054.3	.4	13.1	2.6		
	245	SGMR	6	2054	2054.3	1.2	36.8	7.4		
	410	SGMR	6	2102.8	2103	.6	34.2	6.8		
	245	SGMR	6	2102.9	2103	1.2	26.4	5.3		
	606	SGMR	3	2103	2103.1	.2	12.8	3.8		
20	606	MANI	2	0123.8	0124	2.8	3.9	.6		
	202	VORO	6	0124	0125	4	110.0			
	200	HIRA	45	0124	0124.5	1	180.0D	100.0D		
	100	HIRA	45	0124	0124.5	2	190.0	30.0		
	260	ONDR	44	0642	1158.5	508	25.0			
	188	KIEV	42	1030		95	28.0	13.0		
	202	VORO	44	2100	2236	360		3.0		
	245	SGMR	43	2146.8	2158	107.2D	42.7			
	2800	OTTA	32	1510	1535	50	1.6	0.8		
	18	MCMA	6	1616	1617	2			1	
	245	SGMR	6	1733	1733.6	16.2	8.6	2.6		
	18	MCMA	6	1735	1737	3			1	
	18	BOUL	6	1832	1834	4			1	
	18	MCMA	6	1834	1838	5			2	
	18	MCMA	42	1853	1856	6			1	
	202	VORO	6	2206	2207	3		8.0		
	202	VORO	6	2250	2256	9		6.0		
21	260	ONDR	44	0641	1017.5	509	45.0			
	188	KIEV	42	0729		55	18.0	10.0		
	29	UPIC	45	1234	1236	4				
	2695	PENT	20	1300	1315	70	1.6	0.8		
	2800	OTTA	20	1610	1650	95	1.6	0.8		
	202	VORO	44	2100	2327	360		8.0		
22	2695	MANI	1	0446.7	0446.9	1.5	3.4	.9		
	1415	MANI	2	0446.5	0446.7	1.7	5.7	2.6		
	606	MANI	40	0446.3	0446.7	1.9	56.0	12.5		
	260	ONDR	44	0640	1135.5	510	30.0			
	188	KIEV	42	0700 E	0820	180	58.0	15.0		
	202	VORO	44	2345	0114	195		11.0		
	9240	ARCE	4	0730.2	0730.7	1.5				
	9240	ARCE	20	0745	0734.3	110				
	2800	OTTA	20	1740	1810	110	2.8	1.6		
23	100	HIRA	45	2001 U	2001.8U	1.5	90.0	50.0		
24	113	POTS	40	0616.3U	0616.8U	1.3	200.0	10.0		
	260	ONDR	45	1053	1120.5	30	20.0			
	1420	BOUL	3	1339.5	1343.5	14	2.0	1.0		
	3000	BERL	4	1351.5	1352.5	2	48.0	24.0		
	1470	BERL	4	1351.7	1352.5	2.3	7.5	3.2		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

AUGUST 1974

AUG 1974	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
	9500	BERL	20	1352	1353	6	4.4	2.0		
	8800	SGMR	2	1352.8	1353.2	3.8	6.4	1.9		
	4995	ATHN	1	1352.6	1352.9	.9	3.5	1.1		
	4995	SGMR	2	1352.1	1352.9	9.9	7.4	2.2		
	2695	ATHN	3	1352.2	1352.8	1.2	59.8	1.2		
	2695	PENT	4	1352	1353	2	63.0	31.5		
	2695	SGMR	4	1352	1352.8	3.5	63.0	18.9		
	1420	BOUL	8	1352	1353	2.5	3.0	1.0		
	1415	ATHN	1	1352.3	1352.8	1.4	2.7	.8		
	1415	SGMR	2	1352	1352.6	1.5	6.0	1.8		
	606	SGMR	2	1352.3	1353.2	1.2	1.2	.4		
	2695	BOUL	8	1353	1353.5	2	66.0	28.0		
	2695	SGMR	4	1510.9	1511.3	.7	16.0	4.8		
	2800	OTTA	8	1511	1511.4	.6	20.0			
	2800	OTTA	8	1515.5		.4	2.0			
	2800	OTTA	40	1517	1517.2	1.7	4.0			
	2800	OTTA	20	1735	1745	105	3.2	1.3		
	2695	BOUL	3	1737.5	1746	25	5.0	2.0		
	410	SGMR	6	1742.6	1743.6	2.4	5.6	.6		
	245	SGMR	6	1742.1	1744.3	3	3.6	.4		
25	260	ONDR	41	0636	0814	98	20.0			
	550	KIEV	41	0932	0932.7	3.7	64.0			
	260	ONDR	5	1419.5	1420.5	2.5	15.0			
26	100	GORK	41	1148.5	1148.8	1.1	70.0			
	100	GORK		1148.5	1149.3		30.0			
	3100	CRIM	24	1221			4.0			
	260	ONDR	45	1343	1401	32	15.0			
	18	MCMA	6	1431	1433	3			2	
	260	ONDR	45	1438.5	1438.5	1	20.0			
27	9240	ARCE	22	1054.4	1216.8	165				RECORD DISTUR
	260	ONDR	41	1138	1156.5	214	20.0			
28	3100	CRIM	24	0920			4.0			
29	100	HIRA	45	0033	0034.4	2	140.0	40.0		

Observatories:

ABST = Abastumani
ARCE = Arcetri
BERL = Berlin-Adlershof
BERN = Berne
BORD = Bordeaux
BOUL = Boulder
CANR = Canary Islands
CRIM = Simferopol
CRON = Carnarvon
DWIN = Dwingeloo
GORK = Gorky
HIRA = Hiraiso
HUAN = Huancayo
IRKU = Irkutsk
IZMI = Moscow IZMIRAN
KIEV = Kiev
KISV = Kislovodsk
MANI = Manila
MCMA = McMath-Hulbert
ONDR = Ondrejov
OTTA = Ottawa ARO
PENN = Penn. State Univ.
PENT = Penticton
POTS = Potsdam
SAOP = Sao Paulo
SGMR = Sagamore Hill
SLOU = Slough
TRST = Trieste
TYKW = Toyokawa
UPIC = Upice
VORO = Voroshilov

Explanation of Type Code:

1 Simple 1
2 Simple 1F
3 Simple 2
4 Simple 2F
5 Simple
6 Minor
7 Minor +
8 Spike
20 Simple 3
21 Simple 3A
22 Simple 3F
23 Simple 3AF
24 Rise
25 Rise A
26 Fall
27 Rise and Fall
28 Precursor
29 Post Burst Increase
30 Post Burst Increase A
31 Post Burst Decrease
32 Absorption
40 Fluctuation
41 Group of Bursts
42 Series of Bursts
43 Onset of Noise Storm
44 Noise storm in Progress
45 Complex
46 Complex F
47 Great Burst
48 Major
49 Major +

JULY 1974 DATA

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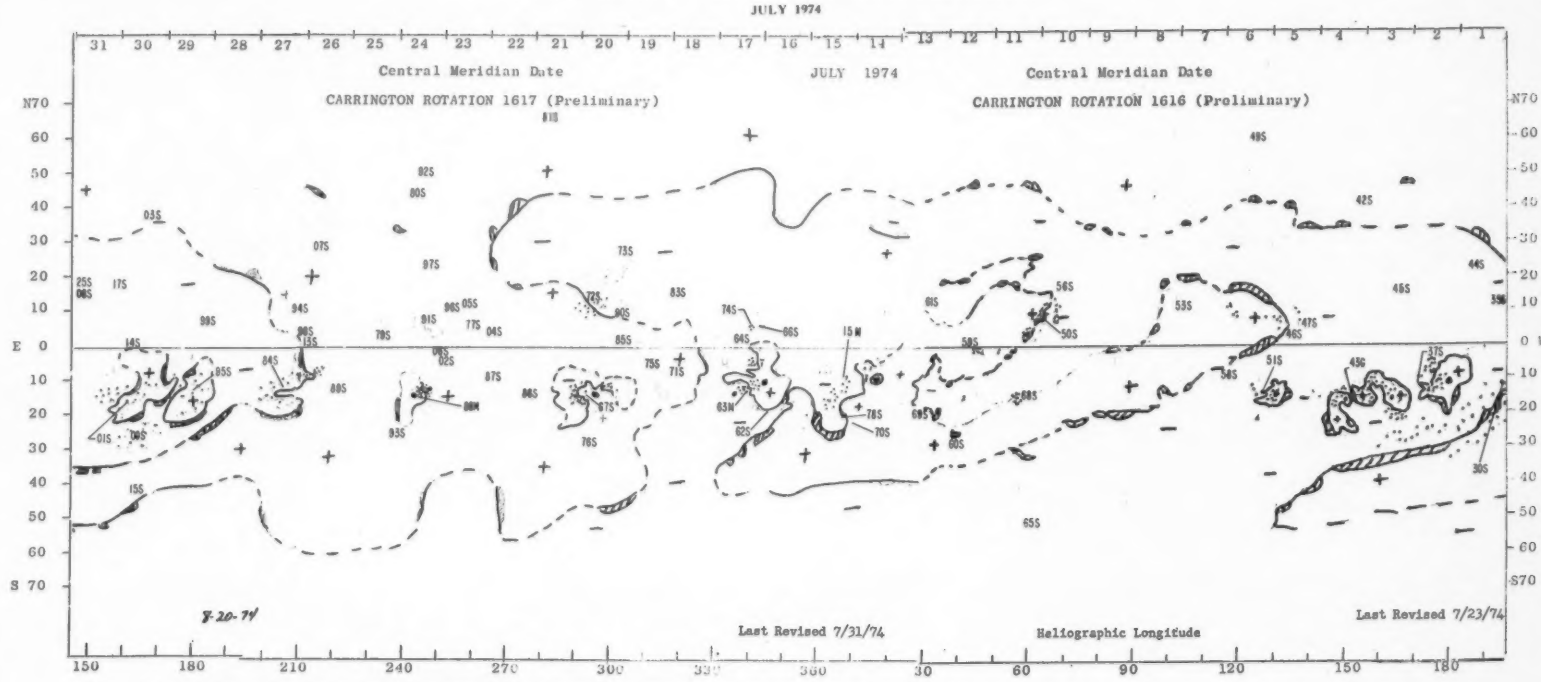
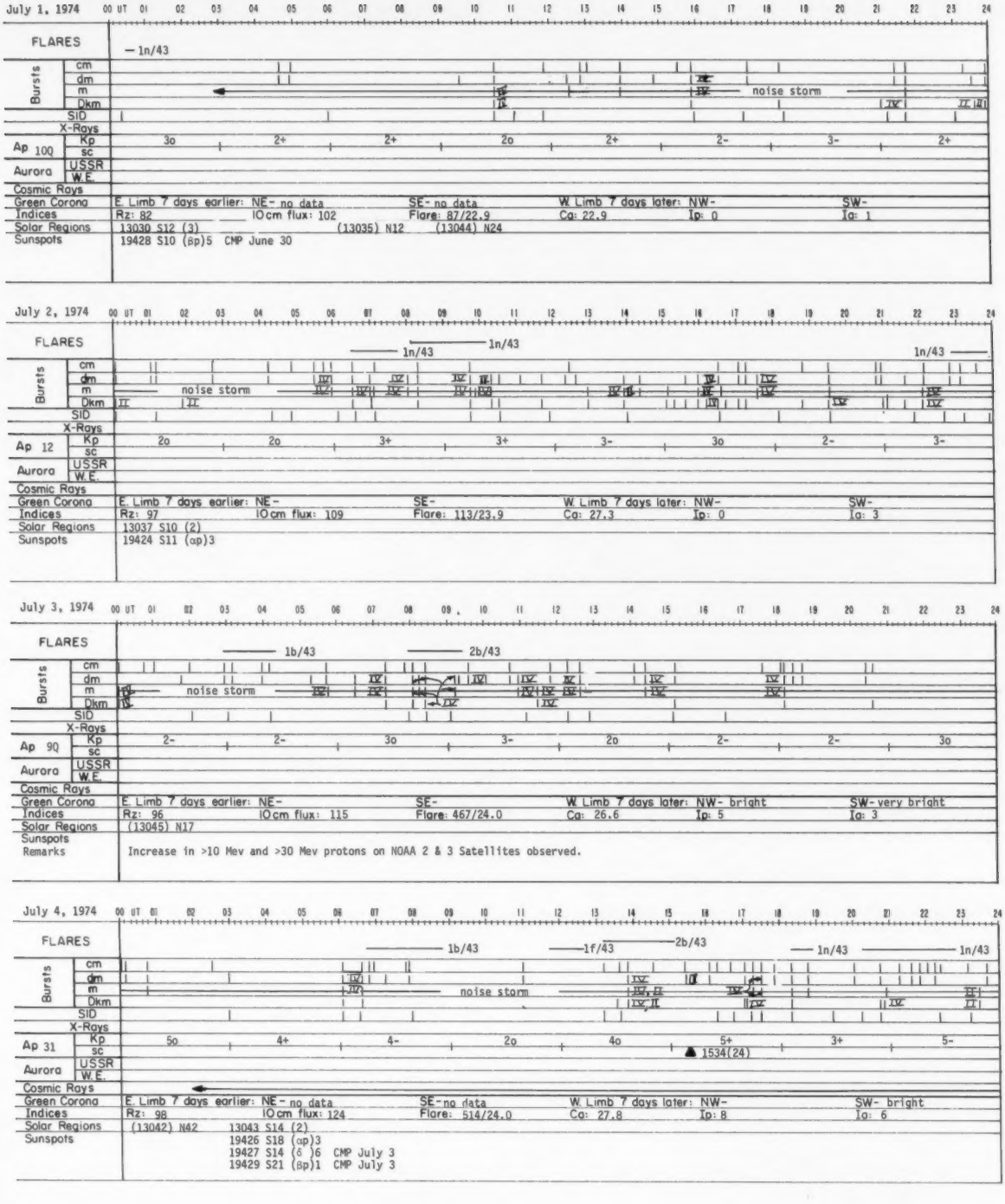
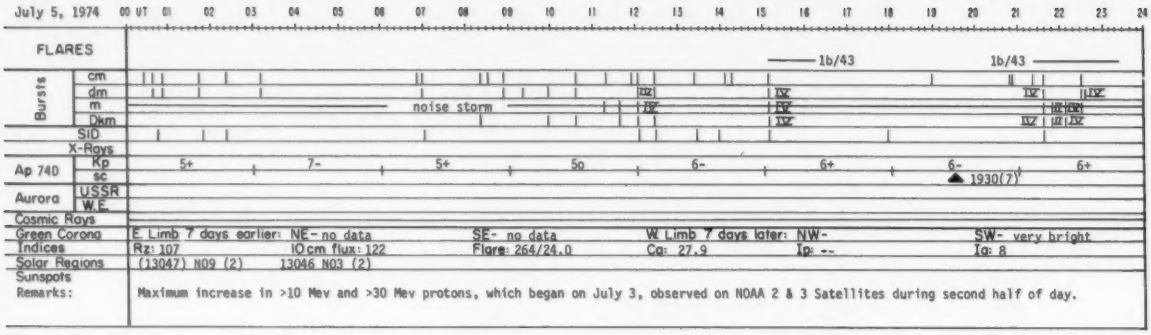
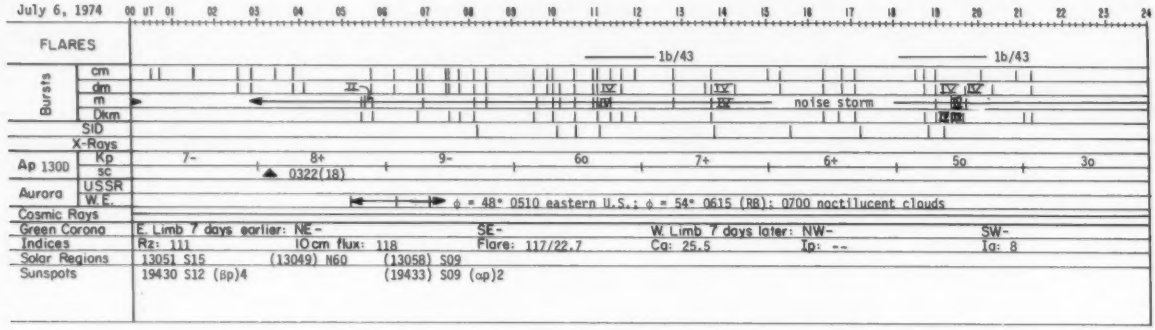
ABBREVIATED CALENDAR RECORD

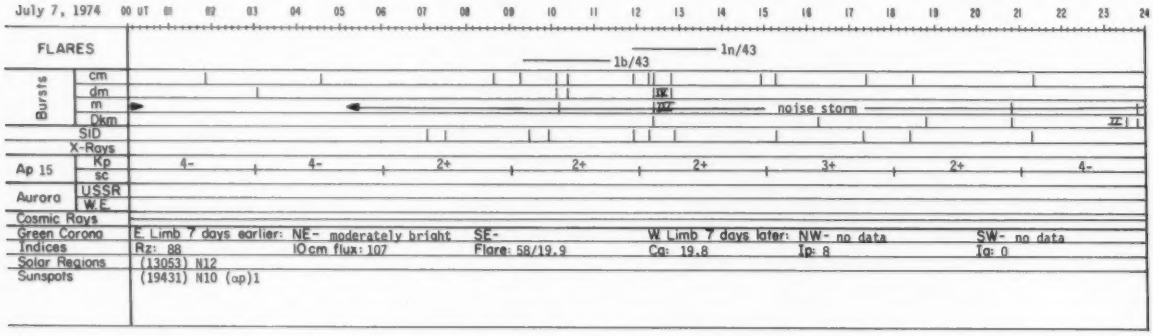


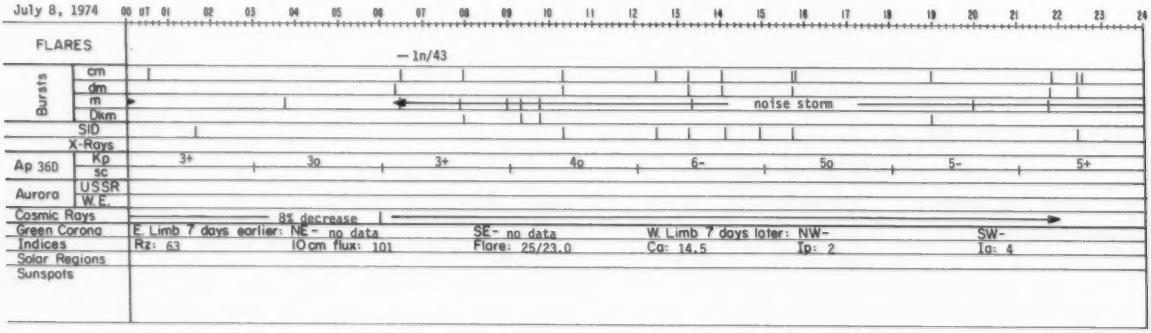
Note: The longitudes on the synoptic charts have been labeled "Carrington longitude". These longitudes are, in fact, in the heliographic system. This change should also be noted on page 20 of the *Descriptive Text* published February 1974 including the reference to Lo, as shown on the pages of solar maps which follow.

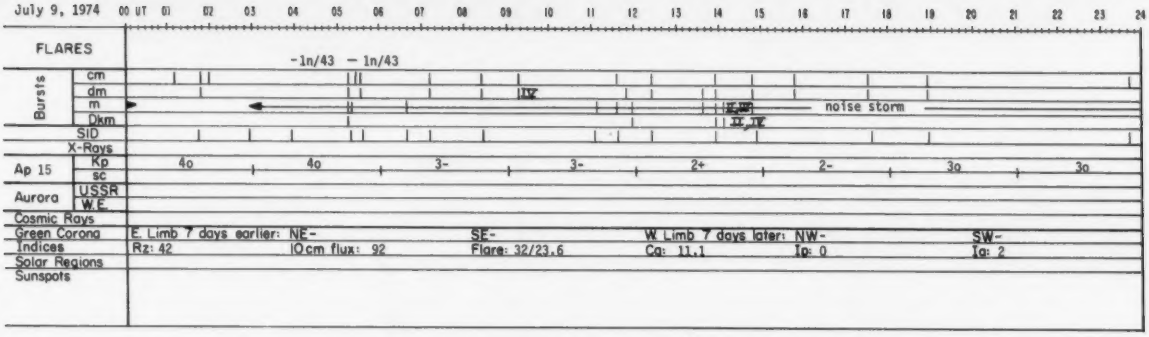

July 1, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1n/43
Bursts
cm
dm
m
noise storm
Dkm
SID
X-Rays
Ap 100
Kp
3o 2+ 2+ 2o 2+ 2- 3- 2+
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- no data SE- no data W. Limb 7 days later: NW- SW-
Indices
Rz: 82 10cm flux: 102 Flare: 87/22.9 Ca: 22.9 Ip: 0 Ia: 1
Solar Regions
13030 S12 (3) (13035) N12 (13044) N24
Sunspots
19428 S10 (βp)5 CMP June 30
July 2, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1n/43
1n/43
1n/43
Bursts
cm
dm
m
noise storm
Dkm
SID
X-Rays
Ap 12
Kp
2o 2o 3+ 3+ 3- 3o 2- 3-
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW-
Indices
Rz: 97 10cm flux: 109 Flare: 113/23.9 Ca: 27.3 Ip: 0 Ia: 3
Solar Regions
13037 S10 (2)
Sunspots
19424 S11 (αp)3
July 3, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1b/43
2b/43
Bursts
cm
dm
m
noise storm
Dkm
SID
X-Rays
Ap 90
Kp
2- 2- 3o 3- 2o 2- 2- 3o
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- bright SW- very bright
Indices
Rz: 96 10cm flux: 115 Flare: 467/24.0 Ca: 26.6 Ip: 5 Ia: 3
Solar Regions
(13045) N17
Sunspots
Remarks
Increase in >10 Mev and >30 Mev protons on NOAA 2 & 3 Satellites observed.
July 4, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1b/43
1f/43
2b/43
1n/43
1n/43
Bursts
cm
dm
m
noise storm
Dkm
SID
X-Rays
Ap 31
Kp
5o 4+ 4- 2o 4o 5+ 3+ 5-
1534(24)
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- no data SE- no data W. Limb 7 days later: NW- SW- bright
Indices
Rz: 98 10cm flux: 124 Flare: 514/24.0 Ca: 27.8 Ip: 8 Ia: 6
Solar Regions
(13042) N42 13043 S14 (2)
Sunspots
19426 S18 (αp)3
19427 S14 (δ)6 CMP July 3
19429 S21 (βp)1 CMP July 3

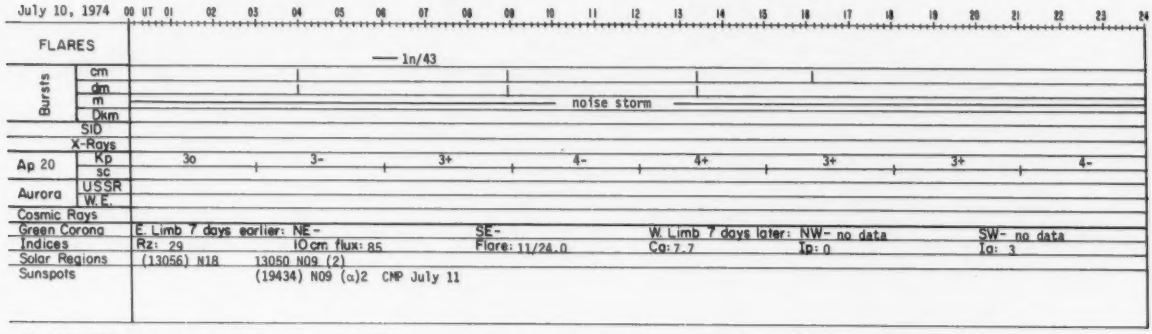

July 5, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1b/43
1b/43
Bursts
cm
dm
m
noise storm
Dkm
SID
X-Rays
Ap 740
Kp
5+ 7- 5+ 5o 6- 6+ 6-
sc
1930(7)
6+
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E Limb 7 days earlier: NE- no data
SE- no data
W Limb 7 days later: NW-
SW- very bright
Indices
Rz: 107
10cm flux: 122
Flare: 264/24.0
Cg: 27.9
Ip: --
Ig: 8
Solar Regions
(13047) N09 (2)
13046 N03 (2)
Sunspots
Remarks:
Maximum increase in >10 Mev and >30 Mev protons, which began on July 3, observed on NOAA 2 & 3 Satellites during second half of day.

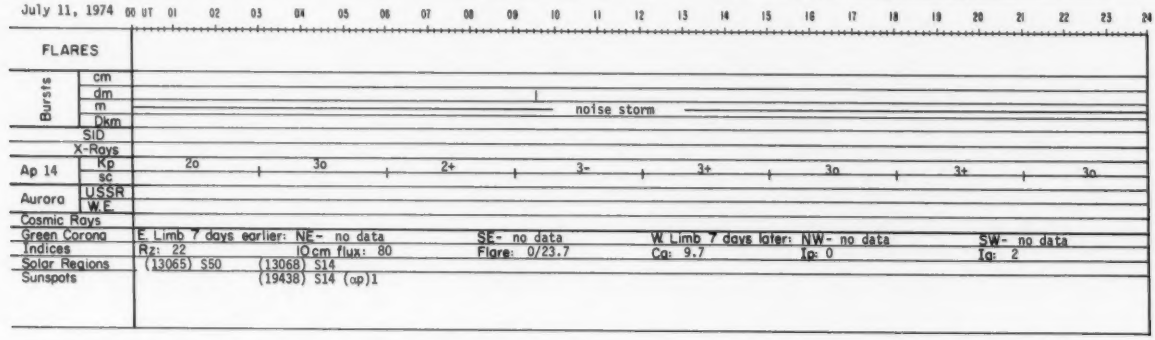

July 6, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1b/43
1b/43
Bursts
cm
dm
m
noise storm
Dkm
SID
X-Rays
Ap 1300
Kp
7- 8+ 9- 6o 7+ 6+ 5o 3o
sc
0322(18)
Aurora
USSR
W.E.
φ = 48° 0510 eastern U.S.; φ = 54° 0615 (RB); 0700 noctilucent clouds
Cosmic Rays
Green Corona
E Limb 7 days earlier: NE-
SE-
W Limb 7 days later: NW-
SW-
Indices
Rz: 111
10cm flux: 118
Flare: 117/22.7
Cg: 25.5
Ip: --
Ig: 8
Solar Regions
13051 S15
(13049) N60
(13058) S09
Sunspots
19430 S12 (βp)4
(19433) S09 (αp)2

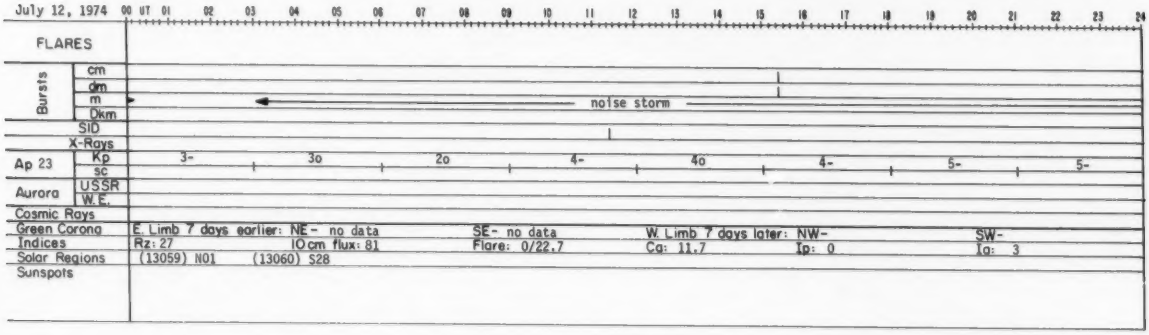

July 7, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1n/43
1b/43
Bursts
cm
dm
m
noise storm
Dkm
SID
X-Rays
Ap 15
Kp
4- 4- 2+ 2+ 2+ 3+ 2+ 4-
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E Limb 7 days earlier: NE- moderately bright
SE-
W Limb 7 days later: NW- no data
SW- no data
Indices
Rz: 88
10cm flux: 107
Flare: 58/19.9
Cg: 19.8
Ip: 8
Ig: 0
Solar Regions
(13053) N12
Sunspots
(19431) N10 (αp)1


July 8, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1n/43
Bursts
cm
dm
m
noise storm
Dkm
SID
X-Rays
Ap 360
Kp
3+ 3o 3+ 4o 6- 5o 5- 5+
sc
Aurora
USSR
W.E.
Cosmic Rays
8% decrease
Green Corona
E Limb 7 days earlier: NE- no data
SE- no data
W Limb 7 days later: NW-
SW-
Indices
Rz: 63
10cm flux: 101
Flare: 25/23.0
Cg: 14.5
Ip: 2
Ig: 4
Solar Regions
Sunspots


July 9, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
-1n/43 — 1n/43
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 15
Kp
sc
4o 4o 3- 3- 2+ 2- 3o 3o
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW-
Indices
Rz: 42 10cm flux: 92 Flare: 32/23.6 Ca: 11.1 Ip: 0 Ia: 2
Solar Regions
Sunspots


July 10, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
— 1n/43
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 20
Kp
sc
3o 3- 3+ 4- 4+ 3+ 3+ 4-
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- no data SW- no data
Indices
Rz: 29 10cm flux: 85 Flare: 11/24.0 Ca: 7.7 Ip: 0 Ia: 3
Solar Regions
(13056) N18 13050 N09 (2)
Sunspots
(19434) N09 (α)2 CMP July 11


July 11, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 14
Kp
sc
2o 3o 2+ 3- 3+ 3o 3+ 3o
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- no data SE- no data W. Limb 7 days later: NW- no data SW- no data
Indices
Rz: 22 10cm flux: 80 Flare: 0/23.7 Ca: 9.7 Ip: 0 Ia: 2
Solar Regions
(13065) S50 (13068) S14
Sunspots
(19438) S14 (αp)1


July 12, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 23
Kp
sc
3- 3o 2o 4- 4o 4- 5- 5-
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- no data SE- no data W. Limb 7 days later: NW- SW-
Indices
Rz: 27 10cm flux: 81 Flare: 0/22.7 Ca: 11.7 Ip: 0 Ia: 3
Solar Regions
(13059) N01 (13060) S28
Sunspots

July 13, 1974 00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm; dm; m — noise storm; Dkm

SID

X-Rays

Ap 12 — Kp: 4- 3o 3o 3- 2+ 2+ 3- 2-; sc

Aurora: USSR; W.E.

Cosmic Rays

Green Corona Indices: E Limb 7 days earlier: NE- no data; SE- no data; W Limb 7 days later: NW- moderately bright; SW- moderately bright
Rz: 28; 10cm flux: 81; Flare: 0/23.1; Ca: 13.9; Ip: 0; Ia: 1

Solar Regions Sunspots: (13061) N14; (13069) S19

July 14, 1974 00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm; dm; m — noise storm; Dkm

SID

X-Rays

Ap 23 — Kp: 4+ 5+ 4- 2o 4- 2- 2+ 4o; sc

Aurora: USSR; W.E. — ϕ 58° 0220-0345, 0310 (mA becoming B) W. Atlantic

Cosmic Rays

Green Corona Indices: E Limb 7 days earlier: NE- no data; SE- no data; W Limb 7 days later: NW- bright; SW- bright
Rz: 46; 10cm flux: 81; Flare: 0/23.7; Ca: 17.1; Ip: 0; Ia: 4

Solar Regions Sunspots

July 15, 1974 00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm; dm; m — noise storm; noise storm; Dkm

SID

X-Rays

Ap 10 — Kp: 3o 3o 3o 2- 3- 2o 1+ 2+; sc

Aurora: USSR; W.E.

Cosmic Rays

Green Corona Indices: E Limb 7 days earlier: NE-; SE-; W Limb 7 days later: NW- moderately bright; SW- very bright
Rz: 65; 10cm flux: 83; Flare: 0/24.0; Ca: 19.7; Ip: 0; Ia: 2

Solar Regions Sunspots: (13070) S21; 13057 S08; (13078) S19; 19432 S09 (βp)6 CMP July 14; S10; S11

July 16, 1974 00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm; dm; m — ns; noise storm; Dkm

SID

X-Rays

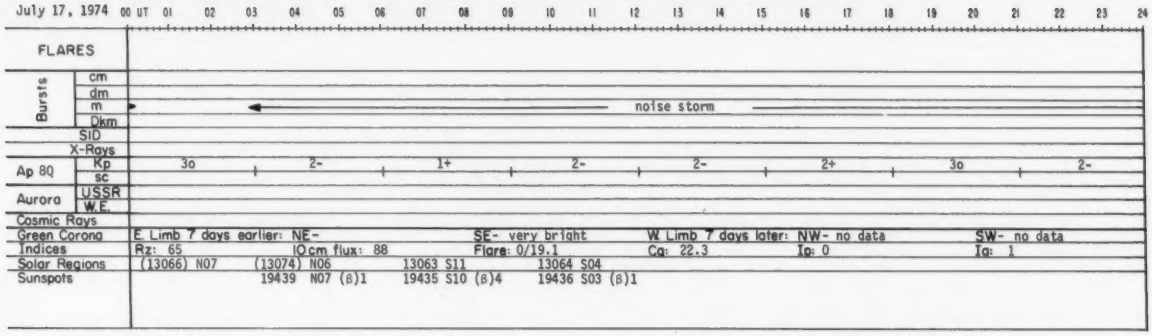
Ap 100 — Kp: 3- 3+ 3o 2+ 2- 1o 2- 2-; sc

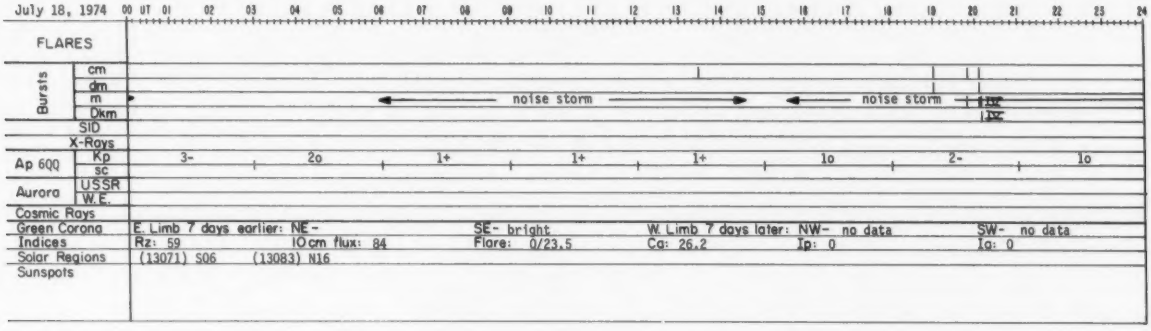
Aurora: USSR; W.E.

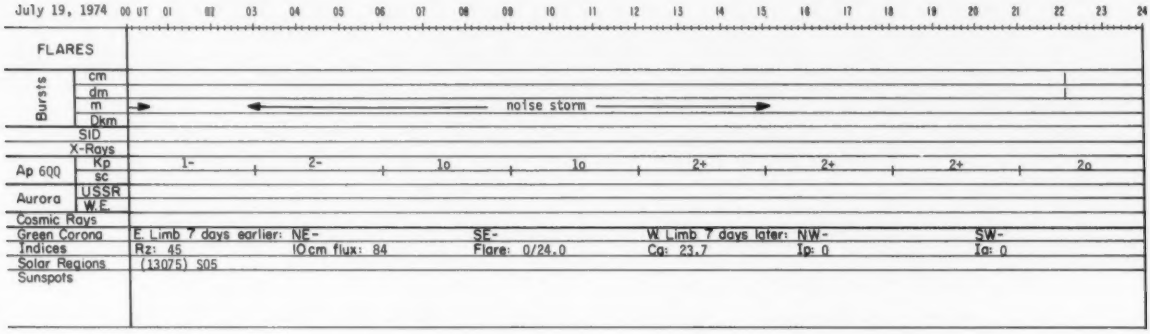
Cosmic Rays

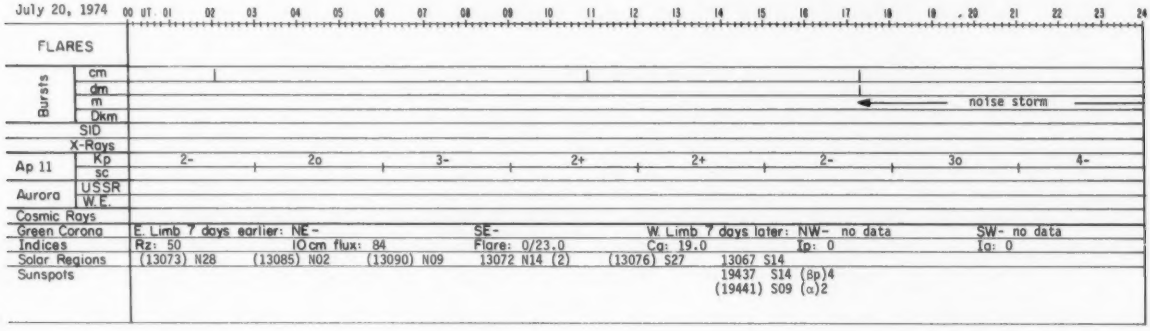
Green Corona Indices: E Limb 7 days earlier: NE-; SE- moderately bright; W Limb 7 days later: NW- very bright; SW- very bright
Rz: 74; 10cm flux: 88; Flare: 0/22.9; Ca: 20.2; Ip: 0; Ia: 4

Solar Regions Sunspots: 13062 S18; S14

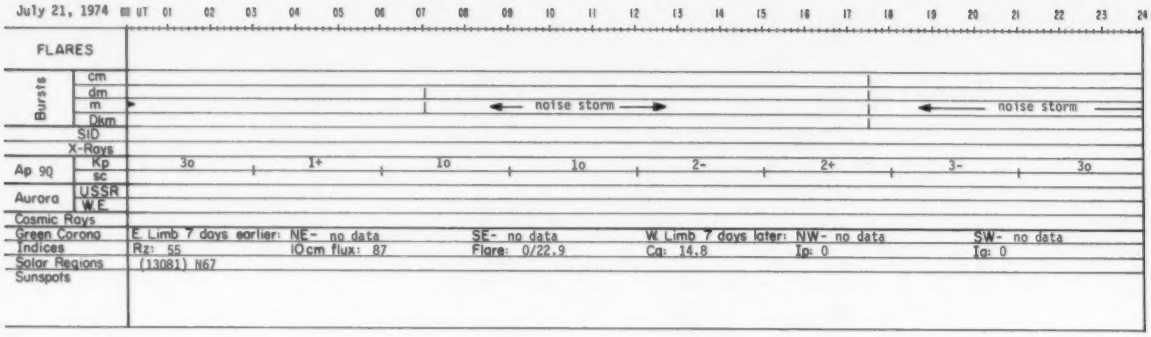

July 17, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 80
Kp
sc
3o 2- 1+ 2- 2- 2+ 3o 2-
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE-
SE- very bright
W. Limb 7 days later: NW- no data
SW- no data
Indices
Rz: 65
10cm flux: 88
Flare: 0/19.1
Ca: 22.3
Ip: 0
Ia: 1
Solar Regions
(13066) N07
(13074) N06
13063 S11
13064 S04
Sunspots
19439 N07 (β)1
19435 S10 (β)4
19436 S03 (β)1

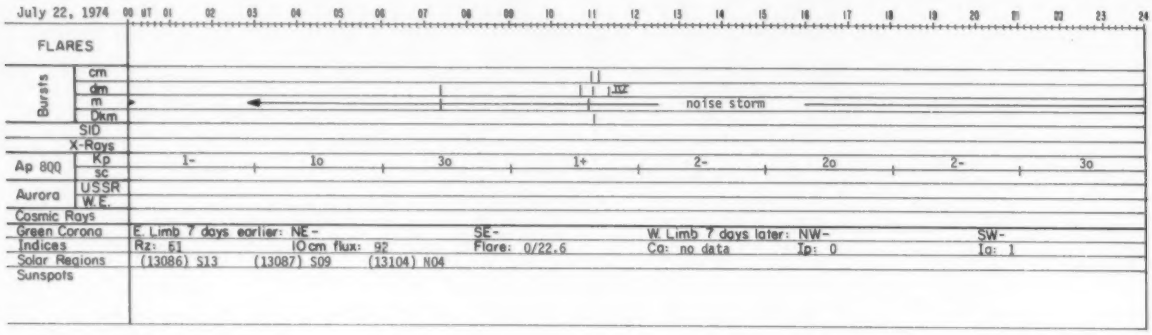

July 18, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
noise storm
SID
X-Rays
Ap 600
Kp
sc
3- 2o 1+ 1+ 1+ 1o 2- 1o
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE-
SE- bright
W. Limb 7 days later: NW- no data
SW- no data
Indices
Rz: 59
10cm flux: 84
Flare: 0/23.5
Ca: 26.2
Ip: 0
Ia: 0
Solar Regions
(13071) S06
(13083) N16
Sunspots

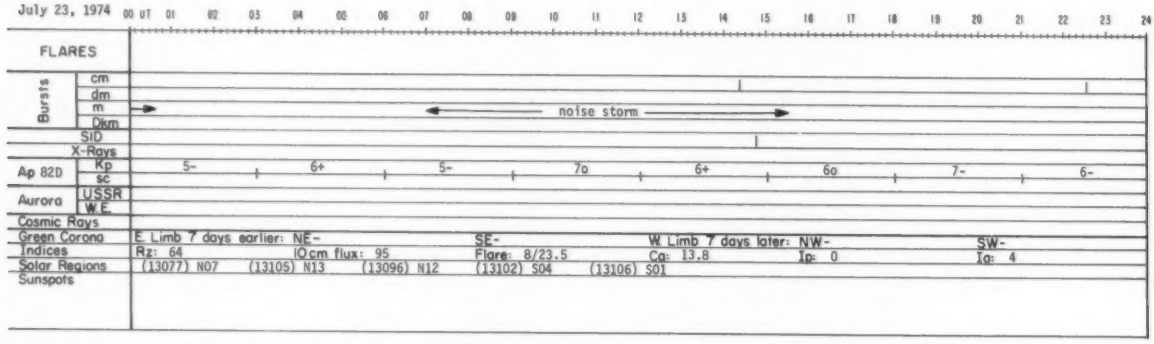

July 19, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 600
Kp
sc
1- 2- 1o 1o 2+ 2+ 2+ 2o
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE-
SE-
W. Limb 7 days later: NW-
SW-
Indices
Rz: 45
10cm flux: 84
Flare: 0/24.0
Ca: 23.7
Ip: 0
Ia: 0
Solar Regions
(13075) S05
Sunspots

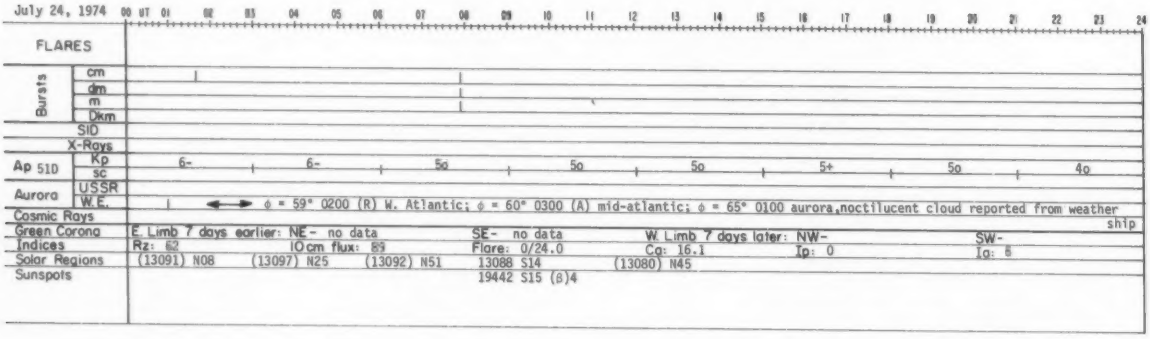

July 20, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 11
Kp
sc
2- 2o 3- 2+ 2+ 2- 3o 4-
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE-
SE-
W. Limb 7 days later: NW- no data
SW- no data
Indices
Rz: 50
10cm flux: 84
Flare: 0/23.0
Ca: 19.0
Ip: 0
Ia: 0
Solar Regions
(13073) N28
(13085) N02
(13090) N09
13072 N14 (2)
(13076) S27
13067 S14
Sunspots
19437 S14 (βp)4
(19441) S09 (α)2

28
Jul 74


July 21, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
noise storm
SID
X-Rays
Ap 90
Kp
3o 1+ 1o 1o 2- 2+ 3- 3o
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E Limb 7 days earlier: NE- no data SE- no data W Limb 7 days later: NW- no data SW- no data
Indices
Rz: 55 10cm flux: 87 Flare: 0/22.9 Ca: 14.8 Ip: 0 Ia: 0
Solar Regions
(13081) N67
Sunspots


July 22, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 80
Kp
1- 1o 3o 1+ 2- 2o 2- 3o
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E Limb 7 days earlier: NE- SE- W Limb 7 days later: NW- SW-
Indices
Rz: 51 10cm flux: 92 Flare: 0/22.6 Ca: no data Ip: 0 Ia: 1
Solar Regions
(13086) S13 (13087) S09 (13104) N04
Sunspots


July 23, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 82
Kp
5- 6+ 5- 7o 6+ 6o 7- 6-
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E Limb 7 days earlier: NE- SE- W Limb 7 days later: NW- SW-
Indices
Rz: 64 10cm flux: 95 Flare: 8/23.5 Ca: 13.8 Ip: 0 Ia: 4
Solar Regions
(13077) N07 (13105) N13 (13096) N12 (13102) S04 (13106) S01
Sunspots


July 24, 1974
00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
SID
X-Rays
Ap 51
Kp
6- 6- 5o 5o 5o 5+ 5o 4o
sc
Aurora
USSR
W.E.
φ = 59° 0200 (R) W. Atlantic; φ = 60° 0300 (A) mid-atlantic; φ = 65° 0100 aurora,noctilucent cloud reported from weather ship
Cosmic Rays
Green Corona
E Limb 7 days earlier: NE- no data SE- no data W Limb 7 days later: NW- SW-
Indices
Rz: 62 10cm flux: 89 Flare: 0/24.0 Ca: 16.1 Ip: 0 Ia: 8
Solar Regions
(13091) N08 (13097) N25 (13092) N51 13088 S14 (13080) N45
19442 S15 (β)4
Sunspots

July 25, 1974 00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm, dm, m, Dkm — noise storm

SID

X-Rays

Ap 22 — Kp: 3o 4- 4o 5- 3o 3+ 3+ 3+ — sc

Aurora: USSR, W.E.

Cosmic Rays

Green Corona Indices: E. Limb 7 days earlier: NE- no data; SE- no data; W. Limb 7 days later: NW-; SW-
Rz: 61; 10cm flux: 87; Flare: 0/24.0; Ca: 17.2; Ip: 0; Ia: 4

Solar Regions: (13093) S25 (13079) N05

Sunspots

July 26 00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES — 1n/95

Bursts: cm, dm, m, Dkm — noise storm

SID

X-Rays

Ap 20 — Kp: 3- 5o 3+ 2+ 3o 3+ 4o 3o — sc

Aurora: USSR, W.E.

Cosmic Rays

Green Corona Indices: E. Limb 7 days earlier: NE-; SE-; W. Limb 7 days later: NW- no data; SW- no data
Rz: 67; 10cm flux: 90; Flare: 22/24.0; Ca: 19.6; Ip: 0; Ia: 5

Solar Regions: 13089 S12 (4) (13107) N29 (13113) N02

Sunspots: (19443) S12 Bf

July 27, 1974 00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm, dm, m, Dkm — noise storm

SID

X-Rays

Ap 24 — Kp: 3+ 4- 5- 5- 4- 2+ 4- 4- — sc

Aurora: USSR, W.E.

Cosmic Rays

Green Corona Indices: E. Limb 7 days earlier: NE-; SE- very bright; W. Limb 7 days later: NW-; SW-
Rz: 60; 10cm flux: 85; Flare: 0/23.4; Ca: 18.0; Ip: 0; Ia: 6

Solar Regions: (13094) N12 (13098) N05 13084 S12 (2)

Sunspots: 19440 S09 (Bp)4

July 28, 1974 00 UT 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm, dm, m, Dkm — noise storm

SID

X-Rays

Ap 18 — Kp: 5- 5- 3- 3+ 1+ 3- 3o 1+ — sc

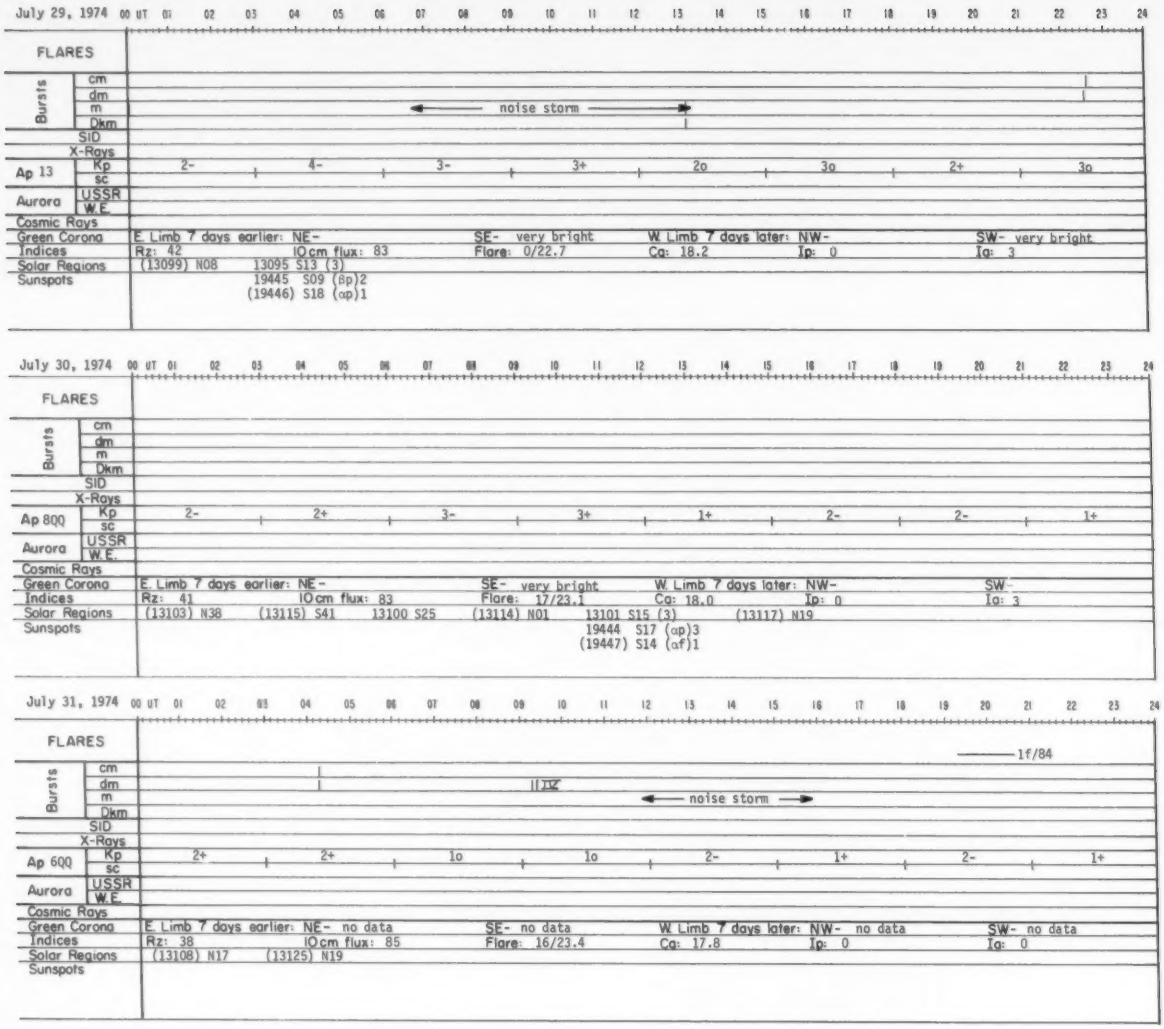
Aurora: USSR, W.E.

Cosmic Rays

Green Corona Indices: E. Limb 7 days earlier: NE-; SE- very bright; W. Limb 7 days later: NW-; SW-
Rz: 61; 10cm flux: 82; Flare: 1/23.3; Ca: 18.4; Ip: 0; Ia: 5

Solar Regions

Sunspots



REGIONAL FLARE INDEX

JULY 1974

MC MATH PLAGE NO.	LAT	CMP DATE	DATE FIRST FLARE	DATE LAST FLARE	FLARE-INDEX SUM	FLARE-INDEX MEAN	TOTAL NO. OF FLARES
13037	S10	74/07/02.7	74/06/27	74/06/27	8.51	8.51	1
13043	S14	74/07/04.1	74/06/29	74/07/10	1739.64	144.97	59
13047	N 9	74/07/05.2	74/06/30	74/06/30	3.72	3.72	1
13057	S 8	74/07/15.2	74/07/08	74/07/09	2.69	1.35	2
13088	S14	74/07/24.3	74/07/23	74/07/23	7.60	7.60	1
13084	S12	74/07/27.4	74/07/31	74/08/03	18.51	4.53	2
13095	S12	74/07/29.4	74/07/26	74/08/04	48.22	4.82	6

Note:
The Regional Flare Index and count of flares in each region has in previous months included each maximum of a multi-maximum event. This has caused some regions to appear to be more flare producing than is probably warranted. Beginning with April 1972 only the principal maximum of a multi-maximum event will be used in the calculation. Also note that only the Confirmed Events as selected for the "I.A.U. Quarterly Bulletin on Solar Activity" are included in the calculation.

Because of differences in method of calculation, the dates of Central Meridian Passage for the McMath Plage Regions vary somewhat from those given elsewhere. Any region not listed here produced no confirmed flares during its disk passage.

MISCELLANEOUS DATA

Contents

Page

Cosmic Ray Indices
Calgary and Sulphur Mt. Neutron Monitors - November 1974 32-33

COSMIC RAY INDICES

(Neutron Monitors)

NOVEMBER 1974

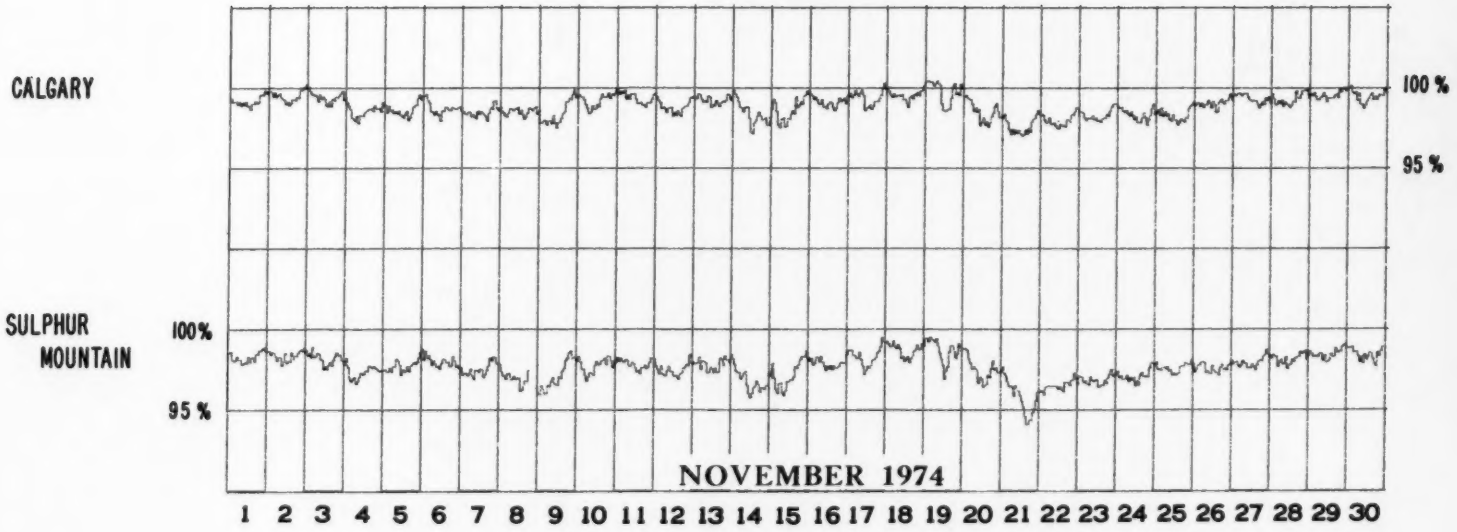
NOV 1974	CALGARY Average cts/hr	SULPHUR MT Average cts/hr
1	11587.4	8609.6
2	11622.6	8616.6
3	11610.0	8600.1
4	11508.8	8526.0
5	11523.8	8558.0
6	11528.1	8583.1
7	11501.6	8541.3
8	11505.9	8489.9(20)
9	11496.6	8504.6
10	11588.9	8561.9
11	11604.8	8569.2
12	11540.6	8538.4
13	11592.6	8567.4
14	11491.1	8481.3
15	11522.8	8511.5
16	11578.9	8573.5
17	11608.7	8611.1
18	11626.4	8646.7
19	11653.2	8646.6
20	11504.9	8543.7
21	11400.4	8392.0
22	11443.2	8452.5
23	11482.0	8482.6
24	11484.8	8504.3
25	11480.7	8548.9
26	11568.9	8547.0
27	11602.2	8579.9
28	11598.7	8599.3
29	11629.2	8626.0
30	11617.4	8624.2
MEAN	11550.2	8554.6

( ) Number of hours for which data are available if less than 24.

COSMIC RAY INDICES

(Neutron Monitors)

NOVEMBER 1974



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